

**From:** (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune  
**To:** (b)(6) .NAVFAC MIDLANT, BD (b)(6) .NAVFAC MIDLANT, Staff (b)(6)  
(b) .NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune  
**Subject:** Correspondence Regarding Group III (Email 7), Freedom of Information Act (FOIA) Request DON-NAVY-2017-003161 - Camp Lejeune - P1383 & P1384 Base Entry Point / CLEO Building Projects Contract No. K1310-002-S / Project Number K1310 SLO Case No. 16-970  
**Date:** Friday, May 12, 2017 13:34:23  
**Attachments:** [FW P-1383 Non-DoD Source Re PRELIMINARY CLEO TAB REPORT.msg](#)  
[FW PRELIMINARY CLEO TAB REPORT.msg](#)  
[Non-DoD Source Re PRELIMINARY CLEO TAB REPORT.msg](#)  
[RE PRELIMINARY CLEO TAB REPORT \(P-1383P-1384\).msg](#)  
[RE PRELIMINARY CLEO TAB REPORT.msg](#)  
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[Non-DoD Source RE PRELIMINARY CLEO TAB REPORT.msg](#)  
[RE Non-DoD Source RE CLEO TELECOMM QC INSPECTION.msg](#)  
[Non-DoD Source PENDING COST PROPOSALS FOR THE BELOW .msg](#)  
[Non-DoD Source PENDING COST PROPOSALS FOR THE BELOW .msg](#)  
[Non-DoD Source VIP TOUR OF CLEO.msg](#)  
[RE RFI for Gatehouse door 122A.msg](#)  
[Non-DoD Source Fwd ROADWAY LIGHTS ON AT WILSON GATE.msg](#)  
[Non-DoD Source RE RFI for Gatehouse door 122A.msg](#)  
[Non-DoD Source FW RFI for Gatehouse door 122A.msg](#)  
[RE ROADWAY LIGHTS ON AT WILSON GATE.msg](#)  
[Non-DoD Source FW RFI for Gatehouse door 122A.msg](#)  
[Non-DoD Source FW UPDATE - WILSON GATE ELECTRICAL .msg](#)  
[RE CLOSE-OUT OF RFI-284 \(AVB BOXES INSIDE WILSON GATE GATEHOUSE\).msg](#)  
[RE TRANSMITTAL 1116 RFI-300 VISITOR'S CENTER WALKWAY CANOPY.msg](#)  
[Non-DoD Source FW Transmittal 1217 SPEC 23 08 00.00 10 COMMISSIONING OF HVAC SYSTEMS SD-02 AND SD-03.msg](#)  
[Non-DoD Source FW TRANSMITTAL 1116 RFI-300 VISITOR'S CENTER WALKWAY CANOPY.msg](#)  
[Non-DoD Source CLOSE-OUT OF RFI-284 \(AVB BOXES INSIDE WILSON GATE GATEHOUSE\).msg](#)  
[Non-DoD Source AVB OM MANUALS.msg](#)  
[RE TRANSMITTAL 1222 SPEC 33 82 00 TELECOMMUNICATIONS OUTSIDE PLANT SD-06 TEST REPORTS CLEO ACCEPTANCE TESTS 24SM FOC AND 50PR COPPER.msg](#)  
[Non-DoD Source FW TRANSMITTAL 1222 SPEC 33 82 00 TELECOMMUNICATIONS OUTSIDE PLANT SD-06 TEST REPORTS CLEO ACCEPTANCE TESTS 24SM FOC AND 50PR COPPER.msg](#)

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FYI

(b)(6)  
Contract Specialist  
ROICC Camp Lejeune

(b)(6)  
DSN (b)  
(b)(6) fax  
(b)(6)



Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6); (b)(6) NAVFAC MIDLANT, IPTMC  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

For continued surveillance of mechanical design issues, please keep the assigned NAVFAC ML Mechanical Engineer copied on all mechanical design-related correspondence by including (b)(6), copied on this email (b)(6).

Respectfully,

(b)(6)

(b)(6), EIT, PMP  
Mechanical Acceptance Engineer  
(b)(6) / DSN (b)(6) / (b)(6) / FAX (b)(6) (b)(6)

-----Original Message-----

From: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
Sent: Monday, May 16, 2016 1:38 PM  
To: (b)(6) NAVFAC MIDLANT, CI; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

Hi all -

Sorry to jump in as I am a non-technical person. I just spoke with (b)(6). Dragados will put in the equipment per the original design. However, this is design-bid-build. From a contracting perspective, should the equipment, if all is installed per the plans, still does not meet the required airflows, this is not the Contractor's responsibility any longer, but a design issue. When the Contractor is not responsible for the design, we cannot hold him responsible for airflows if everything is installed per the A/E design. I believe (b)(6) and I are in agreement that if the CLEO is built per the plans, we will not hold up BOD for design issues. If there are any design changes, they need to be made ASAP if Dragados is intended to perform them. Otherwise, another contract will have to follow to correct after BOD.

R/

(b)(6)

(b)(6)  
Contract Specialist  
ROICC Camp Lejeune  
(b)(6)  
DSN (b)(6)  
(b)(6)  
(b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:39 PM

To: (b)(6) NAVFAC MIDLANT, CI (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)

Subject: [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT

(b)(6),

When you first told me about this I told you I needed to see the TAB report to see if we were in tolerance and we're not. An RFI was asked about this a while back and we stated in that RFI that HP-1 was HP-1 and HP-2 was HP-2. The airflows on the schedule match the total airflow of all the diffusers for each unit. As I told you the cooling capacity for HP-2 is higher because HP-2 has more outside air than HP-1. If you look at the sensible load on the schedule you will see that HP-1 has a higher sensible load than HP-2.

Sincerely,

(b)(6) P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:30 PM

To (b)(6) (NAVFAC) (b)(6) > (b)(6) (b)(6) > (b)(6) (NAVFAC Contract Spec) (b)(6) (b)(6) (b)(6) > (b)(6) (b)(6) > (b)(6) (b)(6) > (b)(6) (b)(6) (Group III Mgt.) (b)(6) (b)(6) (PM, Group III Management) (b)(6) > (b)(6) (Group III Mgt Superintendent) (b)(6) > (b)(6) (b)(6) > (b)(6) J (b)(6) >

Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6) you've known for weeks that HP1 and HP2 are reversed. I told you this myself. They were reversed by my subcontractor based off of the numbers for the total cooling capacity for HPs 1&2 shown on WM602. If your



position is that you want to see HP1 & HP2 installed per the plan then our request to NAVFAC is that you produce data from your calculations that this configuration will achieve what you want given HP sizes of 3.5 and 4.9. I am on my way over to NAVFAC now to discuss this. Thanks. R/(b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w/(b)(6) | c/(b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

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From (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:50 AM  
To (b)(6) (NAVFAC); (b)(6)  
(b)(6) (NAVFAC Contract Spec); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6) P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 11:28 AM

To: (b)(6)

(NAVFAC) (b)(6)

(b)(6)

NAVFAC Contract Spec)

(b)(6)

(b)(6)

Cc: (b)(6)

(Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6)

(Group III Mgt

Superintendent) (b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

Re-sending this email. (b)(6) is out on leave and won't return until 6Jun. I request to find out from (b)(6) (b)(6) (CEMS) and (b)(6) (NAVFAC Norfolk) your thoughts on the initial TAB performance results (HP-1 is at 85% of design). We will be performing TAB again once we replace dampers in the CLEO. Thanks.

(b)(6), I do not think that the TAB results will change too much after we install the new dampers. I am confused by the specs: are heat pumps held to +/- 5% tolerance? The specs state this is the case for groups 2 & 3. Heat pumps are in ground 1.

If the heat pumps, as installed, aren't accepted at 85% of design we will request CEMS run their model again using the data shown on WM602 (attached) before we take additional steps. We think the 2 high-lighted numbers may be inadvertently reversed. Thanks. R/ David

SPEC 23 05 93, page 1: Out-of-tolerance data: Pertains only to field acceptance testing of Final TAB report. When applied to TAB work this phase means "a measurement taken during TAB field acceptance testing which does not fall within the range of plus 5 to minus 5 percent of the original measurement reported on the TAB Report for a specific parameter."

### 3.3.9.1 TAB Field Acceptance Testing

During the field acceptance testing, verify, in the presence of the COTR, random selections of data (water, air quantities, air motion, ) recorded in the TAB Report. Points and areas for field acceptance testing are to be selected by the COTR. Measurement and test procedures are the same as approved for TAB work for the TAB Report.

Field acceptance testing includes verification of TAB Report data recorded for the following equipment groups:

Group 1: All heat pumps and pumps.

Group 2: 25 percent of the return grilles, return registers, exhaust grilles and exhaust registers.

Group 3: 25 percent of the exhaust fans.

Further, if any data on the TAB Report for Groups 2 through 3 is found not to fall within the range of plus 5 to minus 5 percent of the TAB Report data, additional group data verification is required in the presence of the COTR. Verify TAB Report data for one additional piece of equipment in that group. Continue this additional group data verification until out-of-tolerance data ceases to be found.

Good afternoon Scott. Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R/ David

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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e-mail immediately and delete this e-mail and any attachments from your system and any copies you may have made, electronic or otherwise.

From: (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, May 03, 2016 9:48 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) PM, Group III Management  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6),

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 2, 2016 5:28 PM  
To: (b)(6)  
(NAVFAC) (b)(6)  
(b)(6)  
Cc: (b)(6) (b)(6) (Group III Mgt.)  
(b)(6) (PM, Group III Management)  
(b)(6)  
Subject: PRELIMINARY CLEO TAB REPORT  
Importance: High

Good afternoon (b)(6) Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks. R/

(b)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 20, 2016 1:58 PM  
To: (b)(6)  
Subject: Fw: 224887 Field TAB Report CLEO

(b)(6) -

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From: (b)(6)  
Sent: Wednesday, April 20, 2016 11:09 AM  
To: (b)(6)  
Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional





**GROUP III MGT., INC.**  
2820 W Vernon Ave, Kinston, NC 28504

(Phone) 252-527-3333  
(Fax) 252-527-3377

May 17, 2016

(b)(6)

Dragados USA Inc.  
POB 8408  
Camp Lejeune, NC 28547

RE: K1310 - P1383 & P1384 Base Entry Point/CLEO Bldg  
CLEO TAB

Dear (b)(6)

It is Group III's opinion that we have met the requirements of the drawings and specifications. As stated in the Group III memo of May 16, 2016. The air flows for HP-1 are within the requirements shown on WM602 (See Attachment A).

The capacities of HP-1 are within the requirements of WM602 (See Attachment B). We have concern about the Design Basis of HP-2 shown on sheet WM602. The enclosed catalog cut sheet for the Design Basis (See Attachment C) does not indicate that this unit will meet the requirements of the schedule on WM602. It does not seem to have the cooling capacity required by the project.

However, Group III has submitted units that do meet the project requirements for HP-1 and HP-2 (See Attachment B). These submitted units meet the project requirements and have been approved. The question seems to be about HP-1 airflow. The preliminary TAB has shown the airflows to be within the maximum of 1450 and minimum of 1100.

Group III has been asked to switch the existing units HP-1 and HP-2. We do not think this is a prudent course of action. We would not be meeting the project requirements. While we may be solving a "perceived" airflow problem, the unit cooling capacity may pose a new problem.

Group III has installed units that meet the project requirements.

Sincerely,  
Group III Mgt., Inc.

(b)(6)

Project Manager

CC (b)(6) Group III Mgt., Inc. (Fax) (b)(6)  
(b)(6) Group III Mgt., Inc. (Fax) (b)(6)





**GROUP III MGT., INC.**

2820 W Vernon Ave, Kinston, NC 28504

(Phone) 252-527-3333

(Fax) 252-527-3377

Attachment A

May 16, 2016

(b)(6)

Dragados USA Inc.  
POB 8408  
Camp Lejeune, NC 28547

RE: K1310 - P1383 & P1384 Base Entry Point/CLEO Bldg  
CLEO Building TAB With Enclosures

Dear (b)(6)

Group III has spent over 3 months dealing with the TAB on this building. It has cost us a great deal of time and money. First it was the VFD questions/concerns. Now we are being told that the preliminary Air Balance is incorrect and Group III should interchange HP-1 & HP-2. I do not understand this reasoning.

The drawings (WM602) clearly states the air flow requirements for HP-1. Please see the enclosed highlighted columns showing the air flow requirements for HP-1 being a maximum of 1450 CFM and a minimum of 1100 CFM. Our preliminary TAB of HP-1 shows a flow of 1231 CFM. This flow meets the requirements of the project documents. It achieves an air flow of 1231 CFM which is greater than the required minimum of 1100 CFM.

Group III feels that if the units are to be switched it should receive a Modification to the contract.

Please let us know how to proceed.

(b)(6)

Group III Mgt., Inc.

(b)(6)

President

CC: (b)(6) Group III Mgt., Inc. (Fax) (b)(6)  
(b)(6) Group III Mgt., Inc. (Fax) (b)(6)



## TT Series 60Hz - HFC-410A Submittal Data Eng/I-P

## Performance Data AHRI/ASHRAE/ISO 13256-1

## ASHRAE/AHRI/ISO 13256-1. English (I-P) Units

Model	Capacity Modulation	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		Cooling Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°F	
		Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TTH/V/D 026	Part	19,100	19.6	22,100	6.5	22,000	35.3	17,700	5.3	20,900	28.0	15,300	4.6
	Full	25,300	17.7	30,400	5.7	28,700	27.3	24,800	5.0	26,300	19.9	18,900	4.0
TTH/V/D 038	Part	27,000	19.5	31,800	6.4	31,300	34.4	26,100	5.4	30,400	29.6	23,200	4.8
	Full	38,000	17.8	45,100	5.8	43,300	27.1	37,200	5.2	39,900	20.3	29,200	4.4
TTH/V/D 049	Part	36,500	19.4	43,600	6.3	42,000	34.3	35,000	5.1	40,300	27.9	30,100	4.4
	Full	48,700	17.3	59,700	5.5	55,800	26.1	48,400	4.8	50,800	19.3	37,200	4.0
TTH/V/D 064	Part	46,300	18.7	54,700	6.0	53,100	32.4	44,000	5.0	51,200	26.7	38,100	4.4
	Full	61,500	16.2	77,400	5.4	71,500	24.4	63,200	4.8	66,200	18.8	48,700	3.9
TTH/V/D 072	Part	53,000	16.8	64,600	5.2	60,800	28.6	53,200	4.5	58,100	23.2	46,000	3.9
	Full	68,300	15.1	85,300	4.8	77,700	22.5	71,400	4.4	71,700	16.9	55,800	3.7

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature  
 Heating capacities based upon 68°F DB, 59°F WB entering air temperature  
 Ground Loop Heat Pump ratings based on 15% antifreeze solution  
 All ratings based upon operation at lower voltage of dual voltage rated models

## ASHRAE/AHRI/ISO 13256-1. Metric (S-I) Units

Model	Capacity Modulation	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 30°C		Heating 20°C		Cooling 15°C		Heating 10°C		Cooling Full Load 25°C Part Load 20°C		Heating Full Load 0°C Part Load 5°C	
		Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP
TTH/V/D 026	Part	5.60	5.7	6.48	6.5	6.45	10.3	5.19	5.3	6.13	8.2	4.48	4.6
	Full	7.42	5.2	8.91	5.7	8.41	8.0	7.27	5.0	7.71	5.8	5.54	4.0
TTH/V/D 038	Part	7.91	5.7	9.32	6.4	9.17	10.1	7.65	5.4	8.91	8.7	6.60	4.8
	Full	11.14	5.2	13.22	5.8	12.69	7.9	10.90	5.2	11.69	5.9	8.56	4.4
TTH/V/D 049	Part	10.70	5.7	12.78	6.3	12.31	10.1	10.26	5.1	11.81	8.2	8.82	4.4
	Full	14.27	5.1	17.50	5.5	16.35	7.6	14.19	4.8	14.89	5.7	10.90	4.0
TTH/V/D 064	Part	13.57	5.5	16.03	6.0	15.56	9.5	12.90	5.0	15.01	7.8	11.17	4.4
	Full	18.02	4.7	22.68	5.4	20.96	7.2	18.52	4.8	19.40	5.5	14.27	3.9
TTH/V/D 072	Part	15.53	4.9	18.93	5.2	17.82	8.4	15.59	4.5	17.03	6.8	13.48	3.9
	Full	20.02	4.4	25.00	4.8	22.77	6.6	20.93	4.4	21.01	5.0	16.35	3.7

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature  
 Heating capacities based upon 20°C DB, 15°C WB entering air temperature  
 Ground Loop Heat Pump ratings based on 15% antifreeze solution  
 All ratings based upon operation at lower voltage of dual voltage rated models



## TT Series 60Hz - HFC-410A Submittal Data Eng/I-P

## Performance Data - TT H/V/D 038 (Full Load)

1,250 CFM Nominal Airflow Heating, 1,250 CFM Nominal Airflow Cooling

Performance capacities shown in thousands of Btu/h

EWT °F	GPM	WPD		Cooling - EAT 80/57°F						Heating - EAT 70°F				
		PSI	FT	TC	SC	Sens/Tot Ratio	kW	HR	EER	HC	kW	HE	IAT	COP
20	9.0	8.3	19.1	Operation not recommended						28.0	2.02	19.1	87.2	3.8
30	4.5	2.6	6.0	45.6	29.7	0.65	1.49	50.6	30.5	28.3	2.05	21.3	88.9	4.0
	6.8	4.5	10.5	44.9	29.5	0.66	1.44	49.9	31.2	29.7	2.07	22.5	89.9	4.2
	9.0	6.9	16.0	44.4	29.3	0.66	1.43	49.3	31.1	30.4	2.09	23.3	90.5	4.3
40	4.5	2.0	4.7	45.4	29.6	0.65	1.60	50.9	28.4	32.4	2.12	25.2	91.9	4.5
	6.8	3.8	8.7	45.6	29.7	0.65	1.51	50.8	30.1	34.0	2.15	26.7	93.1	4.6
	9.0	5.9	13.6	45.5	29.7	0.65	1.48	50.5	30.7	34.9	2.16	27.5	93.8	4.7
50	4.5	1.7	3.9	44.5	29.3	0.66	1.75	50.4	25.5	36.5	2.20	29.0	95.0	4.9
	6.8	3.2	7.5	45.3	29.6	0.65	1.63	50.8	27.7	38.4	2.24	30.7	96.3	5.0
	9.0	5.2	11.9	45.5	29.7	0.65	1.58	50.9	28.8	39.4	2.26	31.7	97.1	5.1
60	4.5	1.5	3.5	42.9	28.8	0.67	1.93	49.5	22.3	40.6	2.29	32.8	98.0	5.2
	6.8	2.9	6.7	44.1	29.2	0.66	1.79	50.2	24.7	42.8	2.34	34.8	99.6	5.4
	9.0	4.7	10.8	44.6	29.4	0.66	1.73	50.5	25.9	43.9	2.37	35.8	100.5	5.4
70	4.5	1.5	3.4	40.9	28.0	0.68	2.14	48.2	19.2	44.8	2.39	36.6	101.1	5.5
	6.8	2.7	6.3	42.4	28.6	0.67	1.98	49.2	21.4	47.2	2.45	38.8	102.9	5.6
	9.0	4.4	10.1	43.1	28.8	0.67	1.91	49.6	22.6	48.5	2.48	40.0	103.8	5.7
80	4.5	1.5	3.4	38.6	27.1	0.70	2.37	46.7	16.3	49.0	2.50	40.4	104.2	5.7
	6.8	2.7	6.2	40.3	27.7	0.69	2.20	47.8	18.3	51.6	2.56	42.9	106.2	5.9
	9.0	4.2	9.7	41.1	28.1	0.68	2.12	48.3	19.4	53.1	2.60	44.2	107.2	6.0
90	4.5	1.5	3.5	36.2	26.0	0.72	2.64	45.2	13.7	53.2	2.60	44.3	107.3	6.0
	6.8	2.6	6.1	37.9	26.7	0.71	2.45	46.2	15.4	56.1	2.68	47.0	109.5	6.1
	9.0	4.1	9.5	38.7	27.1	0.70	2.36	46.8	16.4	57.7	2.72	48.4	110.6	6.2
100	4.5	1.5	3.5	33.7	24.8	0.73	2.92	43.7	11.6	Operation not recommended				
	6.8	2.6	6.1	35.4	25.6	0.72	2.73	44.7	13.0					
	9.0	4.1	9.4	36.2	26.0	0.72	2.63	45.2	13.7					
110	4.5	1.4	3.2	31.4	23.5	0.75	3.23	42.4	9.7					
	6.8	2.5	5.9	32.9	24.3	0.74	3.03	43.2	10.9					
	9.0	4.0	9.2	33.7	24.7	0.73	2.93	43.6	11.5					
120	4.5	1.1	2.6	29.2	22.3	0.76	3.55	41.4	8.2	Operation not recommended				
	6.8	2.4	5.4	30.5	23.1	0.76	3.35	41.9	9.1					
	9.0	3.9	8.9	31.2	23.4	0.75	3.25	42.3	9.6					

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

AHR/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for AHR/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in the shaded areas.





## PACKAGED UNITS

## SPECIFICATION DATA SHEET

GEOEXCEL HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# AP035

aquarius II

## ELECTRICAL SPECIFICATIONS

Electrical Characteristics	Elect. Symbol	Compressor		Blower		Loop Pump		Min. Circuit Amps	Max. Fuse/Breaker
		RLA	LRA	FLA	HP	FLA	HP		
208/230-1-60	-1	16.7	82.0	4.3	1/2	-	-	25.2	40
208/230-3-60	-3	11.2	58.0	4.3	1/2	-	-	18.3	25
460-3-60	-4	4.5	29.0	4.1	1/2	-	-	9.7	15

## MECHANICAL SPECIFICATIONS

Refrigerant: R-410A			
Air Coil			
Square Feet	Rows Deep	Tube O.D.	Fins/Inch
4.5	3	3/8	14
Water Coil			
Type	Work Press		
Coaxial	450 psig		
Blower Size	Compr Type		
9 x 7 DD	Scroll		
Net Weight	Ship Weight		
365 lbs	400 lbs		

## BLOWER PERFORMANCE

Available External Static Pressure (Inches of Water, Gauge. Wet Coil and Filter Included)												
Blower Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
+					1000							
Norm					900							
-					800							



## FLUID PRESSURE DROP

Fluid Flow (GPM)	Pressure Drop (FOH) (PSIG)	
5	2.0	0.9
7	3.6	1.6
9	5.7	2.5
11	8.2	3.5
13	11.1	4.8

## ISO 13256-1 CERTIFIED PERFORMANCE DATA Rated at 1000 CFM and 9.0 GPM

Water Loop				Ground Water				Ground Loop			
Cooling		Heating		Cooling		Heating		Cooling		Heating	
Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
25,700	19.8	29,500	6.3	29,500	34.0	24,300	5.3	28,200	28.5	22,000	4.8

## CAPACITY DATA - PART LOAD

## COOLING All performance at 1000 CFM and 9.0 GPM

EFT Range (Standard)  
50°F to 100°F

Entering Fluid Temp. (°F)	Entering Air Temp. (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Sensible to Total Ratio	Power Input (kW)	Heat of Reject (MBtuH)	EER
50°	70°db 61°wb	26.07	16.75	0.64	0.81	28.82	32.3
60°		24.94	16.16	0.65	0.95	28.18	26.3
70°		23.82	15.62	0.66	1.09	27.55	21.8
85°		22.13	14.90	0.67	1.31	26.59	16.9
100°		20.44	14.24	0.70	1.52	25.64	13.4
50°	75°db 63°wb	27.94	20.05	0.72	0.81	30.71	34.4
60°		26.74	19.35	0.72	0.95	29.99	28.0
70°		25.53	18.71	0.73	1.10	29.28	23.2
85°		23.73	17.85	0.75	1.31	28.21	18.1
100°		21.92	17.07	0.78	1.53	27.14	14.3
50°	80°db 67°wb	30.68	22.15	0.72	0.82	33.46	37.6
60°		29.36	21.38	0.73	0.96	32.64	30.5
70°		28.04	20.67	0.74	1.11	31.81	25.3
85°		26.06	19.72	0.76	1.32	30.58	19.7
100°		24.08	18.86	0.78	1.54	29.34	15.6
50°	85°db 71°wb	33.42	24.28	0.73	0.82	36.22	40.6
60°		31.98	23.43	0.73	0.97	35.29	33.0
70°		30.55	22.65	0.74	1.11	34.35	27.4
85°		28.39	21.61	0.76	1.33	32.94	21.3
100°		26.24	20.67	0.79	1.55	31.54	16.9

Units are complete packages containing compressor, reversing valve, expansion valve metering device, ECM fan motor and heat exchangers. Also included are safety controls: Overload protection for motors, high and low refrigerant pressure switches and solid state lock-out circuit. Optional UL approved internal electric heater, factory installed with primary thermal overload protection and magnetic contactors (208/230-1-60 only) optional UL approved internal Heat Recovery Package and/or Ground Loop Pump with purge connections available.

Performance based on ARI/ISO rated air flow, fluid flow and voltage. For conditions other than rated, consult the EAD selection software. Due to variations in installation actual performance may vary marginally from tabulated values.

As a result of continuing research and development, specifications are subject to change without notice.

AP035.1IP60 970-399 Rev: 07-12

## HEATING

EFT Range (Standard)  
25°F to 80°F

Entering Fluid Temp. (°F)	Entering Air Temp. (°F)	Total Capacity (MBtuH)	Power Input (kW)	Heat of Abs. (MBtuH)	COP
50°	60°	26.93	1.44	22.01	5.5
60°		29.10	1.46	24.13	5.9
70°		31.28	1.47	26.26	6.2
80°		33.46	1.49	28.38	6.6
50°	70°	25.47	1.47	20.46	5.1
60°		27.52	1.48	22.47	5.4
70°		29.58	1.50	24.47	5.8
80°		31.64	1.51	26.48	6.1
50°	80°	23.75	1.50	18.64	4.6
60°		25.67	1.51	20.51	5.0
70°		27.59	1.53	22.37	5.3
80°		29.50	1.54	24.23	5.6

## LOW TEMP HEATING

Antifreeze Required

25°	60°	21.06	1.40	16.27	4.4
30°		22.13	1.41	17.31	4.6
40°		24.26	1.43	19.39	5.0
25°	70°	19.93	1.43	15.05	4.1
30°		20.93	1.44	16.03	4.3
40°		22.95	1.45	18.00	4.6
25°	80°	18.59	1.46	13.62	3.7
30°		19.53	1.47	14.53	3.9
40°		21.41	1.48	16.35	4.2

GeoMaster, LLC

3512 Cavalier Dr. Ft. Wayne, IN 46808

Phone: 877-443-6411 Fax: 260-482-1489

www.geoexcel.com

HP-2 Design Basis



WATER SOURCE HEAT PUMP SCHEDULE											
SYMBOL	MAX CFM	MIN CFM	INDOOR SECTION		COOLING CAPACITY		HEATING SECTION (BTHU)		FAN HP	SYS. VOLTS	WATER FLOW (GPM)
			O.A. CFM	ENTR.	E.S.P. IN/2	W.G. ENTR.	COOLING CAPACITY TOTAL SEAS. EER	HEATING SECTION (BTHU) CAP. ABSORBER ELEC. (KW)			
FP-1	1450	1100	150	77F 08/65F WB	0.5	37.0	27.0 26.9	33.7 31.8	N/A	5.2	208/1
FP-2	1020	800	300	77F 08/60.8F WB	0.5	40.1	21.4 19.7	37.6 34.9	N/A	5.3	208/1
FP-3	1700	1300	220	77F 08/55.7F WB	0.5	47.6	38.2 20.1	62.0 48.8	N/A	5.2	208/1
FP-4	1200	900	145	75F 08/58.9F WB	0.5	37.0	28.9 19.7	38.7 33.9	N/A	5.3	208/1
DESIGN BASIS											
FLORIDA HEAT PUMP MODEL # 4P49											
FLORIDA HEAT PUMP MODEL # 4P49											
FLORIDA HEAT PUMP MODEL # 4P49											

NOTES:

1. PROVIDE WITH SINGLE POINT POWER CONNECTION.
2. (SEER REQUIREMENTS ARE MINIMUM ARI STANDARDS, BASED ON CERTIFIED PERFORMANCE, AND SHALL INCLUDE FAN MOTOR HEAT ADDITION.
3. FAN SECTIONS SHALL BE FACTORY PROVIDED WITH INTERNAL VIBRATION ISOLATION.
4. INSTALL PVC DWP PAN LINES FROM AIR PIPED TO NEAREST RECEPTOR.
5. CAPACITIES SHOWN ARE NOMINAL VALUES.
6. MAXIMUM LEAVING AIR TEMPERATURES SHALL BE 57 DEG DB AND 54.5 DEG WB.
7. ALL HEAT PUMPS SHALL HAVE A 2 STAGE COMPRESSOR.

SPLIT SYSTEM HEAT PUMP SCHEDULE											
SYS.	TOTAL CFM	O.A. CFM	INDOOR SECTION		COOLING CAPACITY		HEATING SECTION		FAN HP	SYS. VOLTS	DESIGN BASIS
			O.A. CFM	ENTR.	E.S.P. IN/2	W.G. ENTR.	COOLING CAPACITY TOTAL SEAS. EER	HEATING SECTION (BTHU) CAP. ABSORBER ELEC. (KW)			
MS-1	500	0	800/8/63VIB	—	—	—	8.0	—	N/A	N/A	LG
MS-1-1	N/A	N/A	900/8/79VIB	—	—	—	8.0	—	N/A	208/1	LG
MS-2	500	0	800/8/63VIB	—	—	—	10.5	—	N/A	N/A	LG
MS-2-1	N/A	N/A	900/8/79VIB	—	—	—	10.5	—	N/A	208/1	LG

**From:** (b)(6) NAVFAC MIDLANT, CI  
**To:** (b)(6) NAVFAC MIDLANT, IPTMC  
**Cc:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Subject:** FW: PRELIMINARY CLEO TAB REPORT  
**Date:** Thursday, May 19, 2016 9:01:02

---

(b)(6),

As we discussed yesterday, the letter from Group III Management does not seem to resolve the issue. The system design requires the heat pump to provide 1450 CFM, maximum, airflow and the TAB report indicates 1231 CFM, maximum, or 85-percent. Further, the attachments provided in the letter do not substantiate their claim that the units are comparable as they are comparing one manufacturer's Full Load to the other's Part Load information.

Since this is a design issue, I will defer to you (b)(6), and the DOR for an opinion of the situation beyond the above. My expectation is a formal response of some kind from the ROICC/CM will follow from your discussion.

Respectfully,

(b)(6)

(b)(6), EIT, PMP

Mechanical Acceptance Engineer

(b)(6) / DSN: (b)(6) / CELL (b)(6) / FAX (b)(6)

(b)(6)

-----Original Message-----

**From:** (b)(6) [mailto:(b)(6)]

**Sent:** Tuesday, May 17, 2016 12:14 PM

**To:** (b)(6) NAVFAC MIDLANT, CI; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune;

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

**Cc:** (b)(6) (Group III Mgt.); (b)(6) (Group III Mgt Superintendent); (b)(6)

(b)(6) NAVFAC MIDLANT, IPTMC

**Subject:** Re: PRELIMINARY CLEO TAB REPORT

(b)(6) -

Please see the attached TAB response from GIII.

Thank you -

(b)(6) - Vice President

Group III Mgt., Inc.

Cell: (b)(6)

Office: (b)(6)

Fax: (b)(6)

-----Original Message-----

**From:** (b)(6) CIV NAVFAC MIDLANT, CI

**Sent:** Monday, May 16, 2016 4:55 PM

**To:** (b)(6) CIV NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6); (b)(6)

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) MIDLANT, ROICC

Camp Lejeune; (b)(6)

Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6) (b)(6) NAVFAC MIDLANT, IPTMC  
Subject: RE: PRELIMINARY CLEO TAB REPORT

All,

For continued surveillance of mechanical design issues, please keep the assigned NAVFAC ML Mechanical Engineer copied on all mechanical design-related correspondence by including (b)(6), copied on this email (b)(6)

Respectfully,

(b)(6)

(b)(6), EIT, PMP  
Mechanical Acceptance Engineer

(b)(6) / DSN (b)(6) / CELL (b)(6) / FAX (b)(6)

-----Original Message-----

From: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune

Sent: Monday, May 16, 2016 1:38 PM

To: (b)(6) NAVFAC MIDLANT, CI; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; Conroy, (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

Hi all -

Sorry to jump in as I am a non-technical person. I just spoke with (b)(6). Dragados will put in the equipment per the original design. However, this is design-bid-build. From a contracting perspective, should the equipment, if all is installed per the plans, still does not meet the required airflows, this is not the Contractor's responsibility any longer, but a design issue. When the Contractor is not responsible for the design, we cannot hold him responsible for airflows if everything is installed per the A/E design. I believe (b)(6) and I are in agreement that if the CLEO is built per the plans, we will not hold up BOD for design issues. If there are any design changes, they need to be made ASAP if Dragados is intended to perform them. Otherwise, another contract will have to follow to correct after BOD.

R/

(b)(6)

(b)(6)  
Contract Specialist  
ROICC Camp Lejeune

(b)(6)  
DSN (b)(6) fax  
(b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:39 PM

To: (b)(6) NAVFAC MIDLANT, CI (b)(6) NAVFAC MIDLANT,  
ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, (b)(6)

Martin Alos, Jose Ignacio; Smith, Kip J

Subject: [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT

(b)(6),

When you first told me about this I told you I needed to see the TAB report to see if we were in tolerance and we're not. An RFI was asked about this a while back and we stated in that RFI that HP-1 was HP-1 and HP-2 was HP-2. The airflows on the schedule match the total airflow of all the diffusers for each unit. As I told you the cooling capacity for HP-2 is higher because HP-2 has more outside air than HP-1. If you look at the sensible load on the schedule you will see that HP-1 has a higher sensible load than HP-2.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:30 PM

To: (b)(6)

(NAVFAC) (b)(6)

(b)(6)

(NAVFAC Contract Spec)

(b)(6)

(b)(6)

Cc: (b)(6)

(Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6)

>: (b)(6)

(Group III Mgt

Superintendent) (b)(6)

>: (b)(6)

(b)(6) >: (b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6), you've known for weeks that HP1 and HP2 are reversed. I told you this myself. They were reversed by my subcontractor based off of the numbers for the total cooling capacity for HPs 1&2 shown on WM602. If your

position is that you want to see HP1 & HP2 installed per the plan then our request to NAVFAC is that you produce data from your calculations that this configuration will achieve what you want given HP sizes of 3.5 and 4.9. I am on my way over to NAVFAC now to discuss this. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From (b)(6) [[\(b\)\(6\)](mailto:(b)(6))] ]  
Sent: Monday, May 16, 2016 11:50 AM  
To (b)(6) (NAVFAC); (b)(6)  
(b)(6) (NAVFAC Contract Spec); (b)(6)  
(b)(6)  
Cc (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)



Office (b)(6)

Cell (b)(6)

From (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 11:28 AM

To: (b)(6)

(NAVFAC) (b)(6)

NAVFAC Contract Spec)

(b)(6)

(b)(6)

Cc: (b)(6)

(Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6)

(Group III Mgt

Superintendent) (b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

Re-sending this email. (b)(6) is out on leave and won't return until 6Jun. I request to find out from (b)(6) (b)(6) (CEMS) and (b)(6) (NAVFAC Norfolk) your thoughts on the initial TAB performance results (HP-1 is at 85% of design). We will be performing TAB again once we replace dampers in the CLEO. Thanks.

(b)(6), I do not think that the TAB results will change too much after we install the new dampers. I am confused by the specs: are heat pumps held to +/- 5% tolerance? The specs state this is the case for groups 2 & 3. Heat pumps are in ground 1.

If the heat pumps, as installed, aren't accepted at 85% of design we will request CEMS run their model again using the data shown on WM602 (attached) before we take additional steps. We think the 2 high-lighted numbers may be inadvertently reversed. Thanks. R/ (b)(6)

SPEC 23 05 93, page 1: Out-of-tolerance data: Pertains only to field acceptance testing of Final TAB report. When applied to TAB work this phase means "a measurement taken during TAB field acceptance testing which does not fall within the range of plus 5 to minus 5 percent of the original measurement reported on the TAB Report for a specific parameter."

### 3.3.9.1 TAB Field Acceptance Testing

During the field acceptance testing, verify, in the presence of the COTR, random selections of data (water, air quantities, air motion, ) recorded in the TAB Report. Points and areas for field acceptance testing are to be selected by the COTR. Measurement and test procedures are the same as approved for TAB work for the TAB Report.

Field acceptance testing includes verification of TAB Report data recorded for the following equipment groups:

Group 1: All heat pumps and pumps.

Group 2: 25 percent of the return grilles, return registers, exhaust grilles and exhaust registers.

Group 3: 25 percent of the exhaust fans.

Further, if any data on the TAB Report for Groups 2 through 3 is found not to fall within the range of plus 5 to minus 5 percent of the TAB Report data, additional group data verification is required in the presence of the COTR. Verify TAB Report data for one additional piece of equipment in that group. Continue this additional group data verification until out-of-tolerance data ceases to be found.

Good afternoon Scott. Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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e-mail immediately and delete this e-mail and any attachments from your system and any copies you may have made, electronic or otherwise.

From: (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, May 03, 2016 9:48 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6),

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

sparkhurst@cems-ae.com

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 2, 2016 5:28 PM  
To: (b)(6)  
(NAVFAC) (b)(6)  
(b)(6)  
(b)(6) >  
Cc: (b)(6) (Group III Mgt.)  
(b)(6) (b)(6)  
(b)(6)  
Subject: PRELIMINARY CLEO TAB REPORT  
Importance: High

Good afternoon (b)(6). Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks. R/

(b)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(mailto:\(b\)\(6\)\)](mailto:(b)(6))>

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-----Original Message-----

From (b)(6) [[\(mailto:\(b\)\(6\)\)](mailto:(b)(6))] ]

Sent: Wednesday, April 20, 2016 1:58 PM

To (b)(6)

Subject: Fw: 224887 Field TAB Report CLEO

(b)(6)

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From: Timothy Larson

Sent: Wednesday, April 20, 2016 11:09 AM

To (b)(6)

Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional





(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III  
Management); (b)(6) (Group III Mgt Superintendent); (b)(6),  
(b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

Hi all -

Sorry to jump in as I am a non-technical person. I just spoke with (b)(6).  
Dragados will put in the equipment per the original design. However, this is  
design-bid-build. From a contracting perspective, should the equipment, if  
all is installed per the plans, still does not meet the required airflows,  
this is not the Contractor's responsibility any longer, but a design issue.  
When the Contractor is not responsible for the design, we cannot hold him  
responsible for airflows if everything is installed per the A/E design. I  
believe (b)(6) and I are in agreement that if the CLEO is built per the plans,  
we will not hold up BOD for design issues. If there are any design changes,  
they need to be made ASAP if Dragados is intended to perform them.  
Otherwise, another contract will have to follow to correct after BOD.

R/

(b)(6)

(b)(6)  
Contract Specialist  
ROICC Camp Lejeune  
(b)(6)  
DSN (b)(6)  
(b)(6)  
(b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 12:39 PM  
To: (b)(6) NAVFAC MIDLANT, CI; Lacy, (b)(6)  
NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT,  
ROICC Camp Lejeune; (b)(6)  
NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC  
Camp Lejeune; (b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) PM, Group III  
Management; (b)(6) (Group III Mgt Superintendent); (b)(6),  
(b)(6)  
Subject: [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

When you first told me about this I told you I needed to see the TAB report  
to see if we were in tolerance and we're not. An RFI was asked about this a  
while back and we stated in that RFI that HP-1 was HP-1 and HP-2 was HP-2.  
The airflows on the schedule match the total airflow of all the diffusers  
for each unit. As I told you the cooling capacity for HP-2 is higher because  
HP-2 has more outside air than HP-1. If you look at the sensible load on the

schedule you will see that HP-1 has a higher sensible load than HP-2.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:30 PM

To: (b)(6)

(NAVFAC) (b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

Cc: (b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

(b) you've known for weeks that HP1 and HP2 are reversed. I told you this myself. They were reversed by my subcontractor based off of the numbers for the total cooling capacity for HPs 1&2 shown on WM602. If your position is that you want to see HP1 &HP2 installed per the plan then our request to NAVFAC is that you produce data from your calculations that this configuration will achieve what you want given HP sizes of 3.5 and 4.9. I am on my way over to NAVFAC now to discuss this. Thanks. R/ David

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) d (b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

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From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:50 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)  
(NAVFAC Contract Spec); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III  
Management); (b)(6) (Group III Mgt Superintendent); (b)(6),  
(b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:28 AM  
To: (b)(6)

(NAVFAC) (b)(6)  
(b)(6)  
(b)(6) (NAVFAC Contract Spec)  
(b)(6)  
Cc: (b)(6) > (b)(6) (Group III Mgt.)  
(b)(6) (PM, Group III Management)  
(b)(6) (Group III Mgt Superintendent)  
(b)(6)  
(b)(6) >  
Subject: RE: PRELIMINARY CLEO TAB REPORT

Re-sending this email. (b)(6) is out on leave and won't return until 6Jun. I request to find out from (b)(6) (CEMS) and (b)(6) (NAVFAC Norfolk) your thoughts on the initial TAB performance results (HP-1 is at 85% of design). We will be performing TAB again once we replace dampers in the CLEO. Thanks.

(b)(6), I do not think that the TAB results will change too much after we install the new dampers. I am confused by the specs: are heat pumps held to +/- 5% tolerance? The specs state this is the case for groups 2 & 3. Heat pumps are in ground 1.

If the heat pumps, as installed, aren't accepted at 85% of design we will request CEMS runs their model again using the data shown on WM602 (attached) before we take additional steps. We think the 2 high-lighted numbers may be inadvertently reversed. Thanks. R/ (b)(6)

SPEC 23 05 93, page 1: Out-of-tolerance data: Pertains only to field acceptance testing of Final TAB report. When applied to TAB work this phase means "a measurement taken during TAB field acceptance testing which does not fall within the range of plus 5 to minus 5 percent of the original measurement reported on the TAB Report for a specific parameter."

#### 3.3.9.1 TAB Field Acceptance Testing

During the field acceptance testing, verify, in the presence of the COTR, random selections of data (water, air quantities, air motion, ) recorded in the TAB Report. Points and areas for field acceptance testing are to be selected by the COTR. Measurement and test procedures are the same as approved for TAB work for the TAB Report.

Field acceptance testing includes verification of TAB Report data recorded for the following equipment groups:

Group 1: All heat pumps and pumps.

Group 2: 25 percent of the return grilles, return registers, exhaust grilles and exhaust registers.

Group 3: 25 percent of the exhaust fans.

Further, if any data on the TAB Report for Groups 2 through 3 is found not to fall within the range of plus 5 to minus 5 percent of the TAB Report data, additional group data verification is required in the presence of the COTR. Verify TAB Report data for one additional piece of equipment in that group. Continue this additional group data verification until out-of-tolerance data ceases to be found.

Good afternoon (b)(6). Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison |  
cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From: (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, May 03, 2016 9:48 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6),

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 2, 2016 5:28 PM  
To: (b)(6)  
(NAVFAC) <(b)(6)>  
(b)(6)  
(b)(6)  
(b)(6) (Group III Mgt.)  
(b)(6) (PM, Group III Management)  
(b)(6)  
Subject: PRELIMINARY CLEO TAB REPORT  
Importance: High

Good afternoon (b)(6) Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks. R/

(b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) c (b)(6) Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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-----Original Message-----

From: (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]  
Sent: Wednesday, April 20, 2016 1:58 PM  
To: (b)(6)  
Subject: Fw: 224887 Field TAB Report CLEO

(b)(6) -

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From: (b)(6)  
Sent: Wednesday, April 20, 2016 11:09 AM  
To: (b)(6)  
Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional



May 17, 2016

(b)(6)

Dragados USA Inc.  
POB 8408  
Camp Lejeune, NC 28547

RE: K1310 - P1383 & P1384 Base Entry Point/CLEO Bldg  
CLEO TAB

Dear (b)(6)

It is Group III's opinion that we have met the requirements of the drawings and specifications. As stated in the Group III memo of May 16, 2016. The air flows for HP-1 are within the requirements shown on WM602 (See Attachment A).

The capacities of HP-1 are within the requirements of WM602 (See Attachment B). We have concern about the Design Basis of HP-2 shown on sheet WM602. The enclosed catalog cut sheet for the Design Basis (See Attachment C) does not indicate that this unit will meet the requirements of the schedule on WM602. It does not seem to have the cooling capacity required by the project.

However, Group III has submitted units that do meet the project requirements for HP-1 and HP-2 (See Attachment B). These submitted units meet the project requirements and have been approved. The question seems to be about HP-1 airflow. The preliminary TAB has shown the airflows to be within the maximum of 1450 and minimum of 1100.

Group III has been asked to switch the existing units HP-1 and HP-2. We do not think this is a prudent course of action. We would not be meeting the project requirements. While we may be solving a "perceived" airflow problem, the unit cooling capacity may pose a new problem.

Group III has installed units that meet the project requirements.

Sincerely,  
Group III Mgt., Inc.

(b)(6)

Project Manager

CC: (b)(6) Group III Mgt., Inc. (Fax) (b)(6)  
(b)(6) Group III Mgt., Inc. (Fax) (b)(6)





**GROUP III MGT., INC.**

2820 W Vernon Ave, Kinston, NC 28504

(Phone) 252-527-3333

(Fax) 252-527-3377

Attachment A

May 16, 2016

(b)(6)

Dragados USA Inc.  
POB 8408  
Camp Lejeune, NC 28547

RE: K1310 - P1383 & P1384 Base Entry Point/CLEO Bldg  
CLEO Building TAB With Enclosures

Dear (b)(6)

Group III has spent over 3 months dealing with the TAB on this building. It has cost us a great deal of time and money. First it was the VFD questions/concerns. Now we are being told that the preliminary Air Balance is incorrect and Group III should interchange HP-1 & HP-2. I do not understand this reasoning.

The drawings (WM602) clearly states the air flow requirements for HP-1. Please see the enclosed highlighted columns showing the air flow requirements for HP-1 being a maximum of 1450 CFM and a minimum of 1100 CFM. Our preliminary TAB of HP-1 shows a flow of 1231 CFM. This flow meets the requirements of the project documents. It achieves an air flow of 1231 CFM which is greater than the required minimum of 1100 CFM.

Group III feels that if the units are to be switched it should receive a Modification to the contract.

Please let us know how to proceed.

(b)(6)

Group III Mgt., Inc.

(b)(6)

President

CC:

(b)(6)

Group III Mgt., Inc. (Fax)

(b)(6)

(b)(6)

Group III Mgt., Inc. (Fax)

(b)(6)



## TT Series 60Hz - HFC-410A Submittal Data Eng/I-P

## Performance Data AHRI/ASHRAE/ISO 13256-1

## ASHRAE/AHRI/ISO 13256-1. English (I-P) Units

Model	Capacity Modulation	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 86°F		Heating 68°F		Cooling 59°F		Heating 50°F		Cooling Full Load 77°F Part Load 68°F		Heating Full Load 32°F Part Load 41°F	
		Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
TTH/V/D 026	Part	19,100	19.6	22,100	6.5	22,000	35.3	17,700	5.3	20,900	28.0	15,300	4.6
	Full	25,300	17.7	30,400	5.7	28,700	27.3	24,800	5.0	26,300	19.9	18,900	4.0
TTH/V/D 038	Part	27,000	19.5	31,800	6.4	31,300	34.4	26,100	5.4	30,400	29.6	23,200	4.8
	Full	38,000	17.8	45,100	5.8	43,300	27.1	37,200	5.2	39,900	20.3	29,200	4.4
TTH/V/D 049	Part	36,500	19.4	43,600	6.3	42,000	34.3	35,000	5.1	40,300	27.9	30,100	4.4
	Full	48,700	17.3	59,700	5.5	55,800	26.1	48,400	4.8	50,800	19.3	37,200	4.0
TTH/V/D 064	Part	46,300	18.7	54,700	6.0	53,100	32.4	44,000	5.0	51,200	26.7	38,100	4.4
	Full	61,500	16.2	77,400	5.4	71,500	24.4	63,200	4.8	66,200	18.8	48,700	3.9
TTH/V/D 072	Part	53,000	16.8	64,600	5.2	60,800	28.6	53,200	4.5	58,100	23.2	46,000	3.9
	Full	68,300	15.1	85,300	4.8	77,700	22.5	71,400	4.4	71,700	16.9	55,800	3.7

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature  
 Heating capacities based upon 68°F DB, 59°F WB entering air temperature  
 Ground Loop Heat Pump ratings based on 15% antifreeze solution  
 All ratings based upon operation at lower voltage of dual voltage rated models

## ASHRAE/AHRI/ISO 13256-1. Metric (S-I) Units

Model	Capacity Modulation	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling 30°C		Heating 20°C		Cooling 15°C		Heating 10°C		Cooling Full Load 25°C Part Load 20°C		Heating Full Load 0°C Part Load 5°C	
		Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP	Capacity kW	EER W/W	Capacity kW	COP
TTH/V/D 026	Part	5.60	5.7	6.48	6.5	6.45	10.3	5.19	5.3	6.13	8.2	4.48	4.6
	Full	7.42	5.2	8.91	5.7	8.41	8.0	7.27	5.0	7.71	5.8	5.54	4.0
TTH/V/D 038	Part	7.91	5.7	9.32	6.4	9.17	10.1	7.65	5.4	8.91	8.7	6.60	4.8
	Full	11.14	5.2	13.22	5.8	12.69	7.9	10.90	5.2	11.69	5.9	8.56	4.4
TTH/V/D 049	Part	10.70	5.7	12.78	6.3	12.31	10.1	10.26	5.1	11.81	8.2	8.82	4.4
	Full	14.27	5.1	17.50	5.5	16.35	7.6	14.19	4.8	14.89	5.7	10.90	4.0
TTH/V/D 064	Part	13.57	5.5	16.03	6.0	15.56	9.5	12.90	5.0	15.01	7.8	11.17	4.4
	Full	18.02	4.7	22.68	5.4	20.96	7.2	18.52	4.8	19.40	5.5	14.27	3.9
TTH/V/D 072	Part	15.53	4.9	18.93	5.2	17.82	8.4	15.59	4.5	17.03	6.8	13.48	3.9
	Full	20.02	4.4	25.00	4.8	22.77	6.6	20.93	4.4	21.01	5.0	16.35	3.7

Cooling capacities based upon 27°C DB, 19°C WB entering air temperature  
 Heating capacities based upon 20°C DB, 15°C WB entering air temperature  
 Ground Loop Heat Pump ratings based on 15% antifreeze solution  
 All ratings based upon operation at lower voltage of dual voltage rated models



## TT Series 60Hz - HFC-410A Submittal Data Eng/I-P

## Performance Data - TT H/V/D 038 (Full Load)

1,250 CFM Nominal Airflow Heating, 1,250 CFM Nominal Airflow Cooling

Performance capacities shown in thousands of Btu/h

EWT °F	GPM	WPD		Cooling - EAT 80/57°F						Heating - EAT 70°F				
		PSI	FT	TC	SC	Sens/Tot Ratio	kW	HR	EER	HC	kW	HE	IAT	COP
20	9.0	8.3	19.1	Operation not recommended						28.0	2.02	19.1	87.2	3.8
30	4.5	2.6	6.0	45.6	29.7	0.65	1.49	50.6	30.5	28.3	2.05	21.3	88.9	4.0
	6.8	4.5	10.5	44.9	29.5	0.66	1.44	49.9	31.2	29.7	2.07	22.5	89.9	4.2
	9.0	6.9	16.0	44.4	29.3	0.66	1.43	49.3	31.1	30.4	2.09	23.3	90.5	4.3
40	4.5	2.0	4.7	45.4	29.6	0.65	1.60	50.9	28.4	32.4	2.12	25.2	91.9	4.5
	6.8	3.8	8.7	45.6	29.7	0.65	1.51	50.8	30.1	34.0	2.15	26.7	93.1	4.6
	9.0	5.9	13.6	45.5	29.7	0.65	1.48	50.5	30.7	34.9	2.16	27.5	93.8	4.7
50	4.5	1.7	3.9	44.5	29.3	0.66	1.75	50.4	25.5	36.5	2.20	29.0	95.0	4.9
	6.8	3.2	7.5	45.3	29.6	0.65	1.63	50.8	27.7	38.4	2.24	30.7	96.3	5.0
	9.0	5.2	11.9	45.5	29.7	0.65	1.58	50.9	28.8	39.4	2.26	31.7	97.1	5.1
60	4.5	1.5	3.5	42.9	28.8	0.67	1.93	49.5	22.3	40.6	2.29	32.8	98.0	5.2
	6.8	2.9	6.7	44.1	29.2	0.66	1.79	50.2	24.7	42.8	2.34	34.8	99.6	5.4
	9.0	4.7	10.8	44.6	29.4	0.66	1.73	50.5	25.9	43.9	2.37	35.8	100.5	5.4
70	4.5	1.5	3.4	40.9	28.0	0.68	2.14	48.2	19.2	44.8	2.39	36.6	101.1	5.5
	6.8	2.7	6.3	42.4	28.6	0.67	1.98	49.2	21.4	47.2	2.45	38.8	102.9	5.6
	9.0	4.4	10.1	43.1	28.8	0.67	1.91	49.6	22.6	48.5	2.48	40.0	103.8	5.7
80	4.5	1.5	3.4	38.6	27.1	0.70	2.37	46.7	16.3	49.0	2.50	40.4	104.2	5.7
	6.8	2.7	6.2	40.3	27.7	0.69	2.20	47.8	18.3	51.6	2.56	42.9	106.2	5.9
	9.0	4.2	9.7	41.1	28.1	0.68	2.12	48.3	19.4	53.1	2.60	44.2	107.2	6.0
90	4.5	1.5	3.5	36.2	26.0	0.72	2.64	45.2	13.7	53.2	2.60	44.3	107.3	6.0
	6.8	2.6	6.1	37.9	26.7	0.71	2.45	46.2	15.4	56.1	2.68	47.0	109.5	6.1
	9.0	4.1	9.5	38.7	27.1	0.70	2.36	46.8	16.4	57.7	2.72	48.4	110.6	6.2
100	4.5	1.5	3.5	33.7	24.8	0.73	2.92	43.7	11.6	Operation not recommended				
	6.8	2.6	6.1	35.4	25.6	0.72	2.73	44.7	13.0					
	9.0	4.1	9.4	36.2	26.0	0.72	2.63	45.2	13.7					
110	4.5	1.4	3.2	31.4	23.5	0.75	3.23	42.4	9.7					
	6.8	2.5	5.9	32.9	24.3	0.74	3.03	43.2	10.9					
	9.0	4.0	9.2	33.7	24.7	0.73	2.93	43.6	11.5					
120	4.5	1.1	2.6	29.2	22.3	0.76	3.55	41.4	8.2	Operation not recommended				
	6.8	2.4	5.4	30.5	23.1	0.76	3.35	41.9	9.1					
	9.0	3.9	8.9	31.2	23.4	0.75	3.25	42.3	9.6					

Interpolation is permissible; extrapolation is not.

All entering air conditions are 80°F DB and 67°F WB in cooling, and 70°F DB in heating.

AHR/ISO certified conditions are 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating.

Table does not reflect fan or pump power corrections for AHR/ISO conditions.

All performance is based upon the lower voltage of dual voltage rated units.

Performance stated is at the rated power supply; performance may vary as the power supply varies from the rated.

Operation below 40°F EWT is based upon a 15% methanol antifreeze solution.

Operation below 60°F EWT requires optional insulated water/refrigerant circuit.

See performance correction tables for operating conditions other than those listed above.

See Performance Data Selection Notes for operation in the shaded areas.





## PACKAGED UNITS

## SPECIFICATION DATA SHEET

GEOEXCEL HIGH-EFFICIENCY WATER SOURCE HEAT PUMPS

# AP035

aquarius II

## ELECTRICAL SPECIFICATIONS

Electrical Characteristics	Elect. Symbol	Compressor		Blower		Loop Pump		Min. Circuit Amps	Max. Fuse/Breaker
		RLA	LRA	FLA	HP	FLA	HP		
208/230-1-60	-1	16.7	82.0	4.3	1/2	-	-	25.2	40
208/230-3-60	-3	11.2	58.0	4.3	1/2	-	-	18.3	25
460-3-60	-4	4.5	29.0	4.1	1/2	-	-	9.7	15

## MECHANICAL SPECIFICATIONS

Refrigerant: R-410A			
Air Coil			
Square Feet	Rows Deep	Tube O.D.	Fins/Inch
4.5	3	3/8	14
Water Coil			
Type	Work Press		
Coaxial	450 psig		
Blower Size	Compr Type		
9 x 7 DD	Scroll		
Net Weight	Ship Weight		
365 lbs	400 lbs		

## BLOWER PERFORMANCE

Available External Static Pressure (Inches of Water, Gauge. Wet Coil and Filter Included)												
Blower Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
+					1000							
Norm					900							
-					800							



## FLUID PRESSURE DROP

Fluid Flow (GPM)	Pressure Drop (FOH) (PSIG)	
5	2.0	0.9
7	3.6	1.6
9	5.7	2.5
11	8.2	3.5
13	11.1	4.8

## ISO 13256-1 CERTIFIED PERFORMANCE DATA Rated at 1000 CFM and 9.0 GPM

Water Loop				Ground Water				Ground Loop			
Cooling		Heating		Cooling		Heating		Cooling		Heating	
Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
25,700	19.8	29,500	6.3	29,500	34.0	24,300	5.3	28,200	28.5	22,000	4.8

## CAPACITY DATA - PART LOAD

## COOLING All performance at 1000 CFM and 9.0 GPM

EFT Range (Standard)  
50°F to 100°F

Entering Fluid Temp. (°F)	Entering Air Temp. (°F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	Sensible to Total Ratio	Power Input (kW)	Heat of Reject (MBtuH)	EER
50°	70°db 61°wb	26.07	16.75	0.64	0.81	28.82	32.3
60°		24.94	16.16	0.65	0.95	28.18	26.3
70°		23.82	15.62	0.66	1.09	27.55	21.8
85°		22.13	14.90	0.67	1.31	26.59	16.9
100°		20.44	14.24	0.70	1.52	25.64	13.4
50°	75°db 63°wb	27.94	20.05	0.72	0.81	30.71	34.4
60°		26.74	19.35	0.72	0.95	29.99	28.0
70°		25.53	18.71	0.73	1.10	29.28	23.2
85°		23.73	17.85	0.75	1.31	28.21	18.1
100°		21.92	17.07	0.78	1.53	27.14	14.3
50°	80°db 67°wb	30.68	22.15	0.72	0.82	33.46	37.6
60°		29.36	21.38	0.73	0.96	32.64	30.5
70°		28.04	20.67	0.74	1.11	31.81	25.3
85°		26.06	19.72	0.76	1.32	30.58	19.7
100°		24.08	18.86	0.78	1.54	29.34	15.6
50°	85°db 71°wb	33.42	24.28	0.73	0.82	36.22	40.6
60°		31.98	23.43	0.73	0.97	35.29	33.0
70°		30.55	22.65	0.74	1.11	34.35	27.4
85°		28.39	21.61	0.76	1.33	32.94	21.3
100°		26.24	20.67	0.79	1.55	31.54	16.9

Units are complete packages containing compressor, reversing valve, expansion valve metering device, ECM fan motor and heat exchangers. Also included are safety controls: Overload protection for motors, high and low refrigerant pressure switches and solid state lock-out circuit. Optional UL approved internal electric heater, factory installed with primary thermal overload protection and magnetic contactors (208/230-1-60 only) optional UL approved internal Heat Recovery Package and/or Ground Loop Pump with purge connections available.

Performance based on ARI/ISO rated air flow, fluid flow and voltage. For conditions other than rated, consult the EAD selection software. Due to variations in installation actual performance may vary marginally from tabulated values.

As a result of continuing research and development, specifications are subject to change without notice.

AP035.1IP60 970-399 Rev: 07-12

## HEATING

EFT Range (Standard)  
25°F to 80°F

Entering Fluid Temp. (°F)	Entering Air Temp. (°F)	Total Capacity (MBtuH)	Power Input (kW)	Heat of Abs. (MBtuH)	COP
50°	60°	26.93	1.44	22.01	5.5
60°		29.10	1.46	24.13	5.9
70°		31.28	1.47	26.26	6.2
80°		33.46	1.49	28.38	6.6
50°	70°	25.47	1.47	20.46	5.1
60°		27.52	1.48	22.47	5.4
70°		29.58	1.50	24.47	5.8
80°		31.64	1.51	26.48	6.1
50°	80°	23.75	1.50	18.64	4.6
60°		25.67	1.51	20.51	5.0
70°		27.59	1.53	22.37	5.3
80°		29.50	1.54	24.23	5.6

## LOW TEMP HEATING

Antifreeze Required

25°	60°	21.06	1.40	16.27	4.4
30°		22.13	1.41	17.31	4.6
40°		24.26	1.43	19.39	5.0
25°	70°	19.93	1.43	15.05	4.1
30°		20.93	1.44	16.03	4.3
40°		22.95	1.45	18.00	4.6
25°	80°	18.59	1.46	13.62	3.7
30°		19.53	1.47	14.53	3.9
40°		21.41	1.48	16.35	4.2

GeoMaster, LLC

3512 Cavalier Dr. Ft. Wayne, IN 46808

Phone: 877-443-6411 Fax: 260-482-1489

www.geoexcel.com

HP-2 Design Basis





**From:** (b)(6) [NAVFAC MIDLANT, CI](#)  
**To:** (b)(6)  
**Cc:** (b)(6) [MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, IPTMC](#);  
(b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6)  
(b) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** RE: PRELIMINARY CLEO TAB REPORT (P-1383/P-1384)  
**Date:** Tuesday, May 17, 2016 17:00:53

---

(b)(6),

I concur.

Respectfully,

(b)(6)

(b)(6), EIT, PMP

Mechanical Acceptance Engineer

(b)(6) / DSN: (b)(6) / CELL: (b)(6) FAX (b)(6)

(b)(6)

-----Original Message-----

From: (b)(6) [\[mailto:\(b\)\(6\)\]](#)

Sent: Tuesday, May 17, 2016 1:55 PM

To: (b)(6) NAVFAC MIDLANT, CI

Cc: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC  
MIDLANT, IPTMC; (b)(6)

Subject: [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT (P-1383/P-1384)

(b)(6)

As we discussed in our phone conversation we can provide our calculations however the contractor is responsible for meeting the schedule on the contract drawings. We have reviewed the calculations more than several times throughout the design and during construction especially when the RFI was written regarding if HP-1 was HP-1 and HP-2 was HP-2. If the submitted units (or the units we used as the basis of design) are installed per the contract drawings they should meet the requirements in the schedule. We tried to help the contractor out by reviewing a preliminary TAB report to see if the units as installed would meet the contract drawings and they don't. From here on out we'd like to communicate via RFI's and submittals only with the contractor as typically done to help prevent these emails that have been going back and forth. Please let me know if you have any questions or concerns.

It was a pleasure talking with you today!

Sincerely,

(b)(6) P.E., CxA, LEED AP BD+C CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

-----Original Message-----

From: (b)(6) NAVFAC MIDLANT, CI [\[mailto:\(b\)\(6\)\]](#)

Sent: Monday, May 16, 2016 12:38 PM

To: (b)(6)

Cc: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6)

(b)(6) NAVFAC MIDLANT, IPTMC (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT (P-1383/P-1384)

(b)

As part of the design contract, I assume you submitted a set of calculations since typical final design submittals require calcs, specs, and drawings. I don't have visibility to the design contract work-product other than the bid documents, so we should just need a copy of those summary unit calculations to resolve this issue with the GC.

Respectfully,

(b)

(b)(6), EIT, PMP  
Mechanical Acceptance Engineer

(b)(6) / DSN: (b)(6) / CELL: (b)(6) / FAX: (b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 11:50 AM

To: (b)(6) NAVFAC MIDLANT, CI; (b)(6) NAVFAC MIDLANT,

ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

CIV NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group

III Mgt Superintendent); (b)(6)

Subject: [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 11:28 AM

To: (b)(6) (NAVFAC)  
(b)(6)  
(b)(6) (NAVFAC Contract Spec)  
(b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.) (b)(6); (b)(6)  
(b)(6) (PM, Group III Management) (b)(6) >: (b)(6) (Group III Mgt  
Superintendent) (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

Re-sending this email. (b)(6) is out on leave and won't return until 6Jun. I request to find out from (b)(6) (b)(6) (CEMS) and (b)(6) (NAVFAC Norfolk) your thoughts on the initial TAB performance results (HP-1 is at 85% of design). We will be performing TAB again once we replace dampers in the CLEO. Thanks.

(b)(6), I do not think that the TAB results will change too much after we install the new dampers. I am confused by the specs: are heat pumps held to +/- 5% tolerance? The specs state this is the case for groups 2 & 3. Heat pumps are in ground 1.

If the heat pumps, as installed, aren't accepted at 85% of design we will request CEMS run their model again using the data shown on WM602 (attached) before we take additional steps. We think the 2 high-lighted numbers may be inadvertently reversed. Thanks. R/ (b)(6)

SPEC 23 05 93, page 1: Out-of-tolerance data: Pertains only to field acceptance testing of Final TAB report. When applied to TAB work this phase means "a measurement taken during TAB field acceptance testing which does not fall within the range of plus 5 to minus 5 percent of the original measurement reported on the TAB Report for a specific parameter."

#### 3.3.9.1 TAB Field Acceptance Testing

During the field acceptance testing, verify, in the presence of the COTR, random selections of data (water, air quantities, air motion, ) recorded in the TAB Report. Points and areas for field acceptance testing are to be selected by the COTR. Measurement and test procedures are the same as approved for TAB work for the TAB Report.

Field acceptance testing includes verification of TAB Report data recorded for the following equipment groups:

Group 1: All heat pumps and pumps.

Group 2: 25 percent of the return grilles, return registers, exhaust grilles and exhaust registers.

Group 3: 25 percent of the exhaust fans.

Further, if any data on the TAB Report for Groups 2 through 3 is found not to fall within the range of plus 5 to minus 5 percent of the TAB Report data, additional group data verification is required in the presence of the COTR. Verify TAB Report data for one additional piece of equipment in that group. Continue this additional group data verification until out-of-tolerance data ceases to be found.

Good afternoon Scott. Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]

Sent: Tuesday, May 03, 2016 9:48 AM

To (b)(6) (NAVFAC); (b)(6)

(b)(6)

Cc (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management)

Subject: RE: PRELIMINARY CLEO TAB REPORT



(b) ,

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6) , P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 2, 2016 5:28 PM  
To: (b)(6) <(b)(6)> (NAVFAC)  
(b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.) <(b)(6)>  
(b)(6) (PM, Group III Management) (b)(6)  
Subject: PRELIMINARY CLEO TAB REPORT  
Importance: High

Good afternoon (b) Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks.  
R/ (b)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

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-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 20, 2016 1:58 PM  
To: (b)(6)  
Subject: Fw: 224887 Field TAB Report CLEO

(b)(6)

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From: (b)(6)  
Sent: Wednesday, April 20, 2016 11:09 AM  
To: (b)(6)  
Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional



Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 12:30 PM

To: (b)(6) (NAVFAC)

(b)(6)

(b)(6) (NAVFAC Contract Spec)

(b)(6)

(b)(6)

Cc: (b)(6) (Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6) (Group III Mgt  
Superintendent) (b)(6)

(b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6), you've known for weeks that HP1 and HP2 are reversed. I told you this myself. They were reversed by my subcontractor based off of the numbers for the total cooling capacity for HPs 1&2 shown on WM602. If your position is that you want to see HP1 & HP2 installed per the plan then our request to NAVFAC is that you produce data from your calculations that this configuration will achieve what you want given HP sizes of 3.5 and 4.9. I am on my way over to NAVFAC now to discuss this. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)

<mailto:(b)(6)>

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From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:50 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6) (NAVFAC Contract Spec); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:28 AM  
To: (b)(6) (NAVFAC)  
(b)(6)  
(b)(6) (NAVFAC Contract Spec)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6)  
(b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

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Good afternoon (b)(6). Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From: (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]  
Sent: Tuesday, May 03, 2016 9:48 AM  
To: (b)(6) (NAVFAC); (b)(6) (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6) E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From (b)(6) [mailto:(b)(6)]

Sent: Monday, May 2, 2016 5:28 PM

To: (b)(6) NAVFAC)

(b)(6)

(b)(6)

Cc: (b)(6) (Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6) >

Subject: PRELIMINARY CLEO TAB REPORT

Importance: High

Good afternoon (b)(6). Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks.

R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

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-----Original Message-----

From (b)(6) [mailto:(b)(6)]

Sent: Wednesday, April 20, 2016 1:58 PM

To: Kramer, David

Subject: Fw: 224887 Field TAB Report CLEO

(b)(6) -

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.



-----Original Message-----

From: (b)(6)

Sent: Wednesday, April 20, 2016 11:09 AM

To: (b)(6)

Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional

**From:** (b)(6)  
**To:** (b)(6) [\\_NAVFAC MIDLANT. CI](#) (b)(6) [\\_NAVFAC MIDLANT. ROICC Camp Lejeune](#) (b)(6) [\\_NAVFAC MIDLANT. ROICC Camp Lejeune](#) (b)(6) [\\_NAVFAC MIDLANT. ROICC Camp Lejeune](#) (b)(6)  
**Cc:** (b)(6) [\(Group III Mgt.\)](#) (b)(6) [\(PM, Group III Management\)](#) (b)(6) [\(Group III Mgt Superintendent\)](#) (b)(6)  
**Subject:** [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT  
**Date:** Monday, May 16, 2016 12:39:22  
**Attachments:** [image001.png](#)

---

(b)(6),

When you first told me about this I told you I needed to see the TAB report to see if we were in tolerance and we're not. An RFI was asked about this a while back and we stated in that RFI that HP-1 was HP-1 and HP-2 was HP-2. The airflows on the schedule match the total airflow of all the diffusers for each unit. As I told you the cooling capacity for HP-2 is higher because HP-2 has more outside air than HP-1. If you look at the sensible load on the schedule you will see that HP-1 has a higher sensible load than HP-2.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

**From:** (b)(6) [[mailto:\(b\)\(6\)](#)]

**Sent:** Monday, May 16, 2016 12:30 PM

**To:** (b)(6) (NAVFAC)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

**Cc:** (b)(6)

(b)(6) (PM, Group III Management) (b)(6)

Superintendent) (b)(6)

(b)(6)

**Subject:** RE: PRELIMINARY CLEO TAB REPORT

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position is that you want to see HP1 & HP2 installed per the plan then our request to NAVFAC is that you produce data from your calculations that this configuration will achieve what you want given HP sizes of 3.5 and 4.9. I am on my way over to NAVFAC now to discuss this. Thanks. R/(b)(6)

(b)(6) Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From: (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]  
Sent: Monday, May 16, 2016 11:50 AM  
To: (b)(6) (NAVFAC); (b)(6) (raymond.conroy@navy mil); (b)(6) (NAVFAC Contract Spec); (b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

The only issues we see is HP-1 was installed as HP-2 and vice versa. This is causing the units to not meet the design airflows. Recommend installing the heat pumps as shown on the contract drawings. Also for the next TAB report please provide each heat pump airflows on high and low speed.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]

Sent: Monday, May 16, 2016 11:28 AM

To: (b)(6) NAVFAC)

(b)(6)

(b)(6)

(NAVFAC Contract Spec)

(b)(6)

(b)(6)

Cc: (b)(6)

Group III Mgt.) (b)(6)

(b)(6) (PM, Group III Management) (b)(6)

(Group III Mgt

Superintendent) (b)(6)

Subject: RE: PRELIMINARY CLEO TAB REPORT

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If the heat pumps, as installed, aren't accepted at 85% of design we will request CEMS runs their model again using the data shown on WM602 (attached) before we take additional steps. We think the 2 high-lighted numbers may be inadvertently reversed. Thanks. R/ David

SPEC 23 05 93, page 1: Out-of-tolerance data: Pertains only to field acceptance testing of Final TAB report. When applied to TAB work this phase means "a measurement taken during TAB field acceptance testing which does not fall within the range of plus 5 to minus 5 percent of the original measurement reported on the TAB Report for a specific parameter."

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During the field acceptance testing, verify, in the presence of the COTR, random selections of data (water, air quantities, air motion, ) recorded in the TAB Report. Points and areas for field acceptance testing are to be selected by the COTR. Measurement and test procedures are the same as approved for TAB work for the TAB Report.

Field acceptance testing includes verification of TAB Report data recorded for the following equipment groups:

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Group 3: 25 percent of the exhaust fans.

Further, if any data on the TAB Report for Groups 2 through 3 is found not to fall within the range of plus 5 to minus 5 percent of the TAB Report data, additional group data verification is required in the presence of the COTR. Verify TAB Report data for one additional piece of equipment in that group. Continue this additional group data verification until out-of-tolerance data ceases to be found.

Good afternoon Scott. Attached is an executive summary of the CLEO TAB. All items are within 5% of design max CFM except for HP-1. It is at 85%, or 15% shy. The design CFM for HP1 is 1100 (min) to 1450 (max). The actual reading during tab was 1231.

We will be performing TAB again once we replace dampers in the CLEO. We welcome your response to this preliminary TAB. Thanks. R/ David

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From: Scott Parkhurst [[\(b\)\(6\)](mailto:(b)(6))]

Sent: Tuesday, May 03, 2016 9:48 AM

To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) PM, Group III Management)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

(b)(6)

Please provide an executive summary at the front of the report showing all items not within specification.

Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 2, 2016 5:28 PM  
To: (b)(6) (NAVFAC)  
(b)(6)  
(b)(6)  
Cc: (b)(6) Group III Mgt.; (b)(6)  
(b)(6) (PM, Group III Management); (b)(6) >  
Subject: PRELIMINARY CLEO TAB REPORT  
Importance: High

Good afternoon (b)(6). Attached is the preliminary TAB report for the CLEO building. Request your early review and comments. My team is available for a phone call if you think discussing your thoughts would help. Thanks.  
R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) c (b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

Dragados USA, Inc. is An Equal Opportunity Employer

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Wednesday, April 20, 2016 1:58 PM

To: (b)(6)

Subject: Fw: 224887 Field TAB Report CLEO

(b)(6) -

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From (b)(6)

Sent: Wednesday, April 20, 2016 11:09 AM

To (b)(6)

Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional

**From:** (b)(6) NAVFAC MIDLANT, CI  
**To:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)  
(b)(6)  
**Cc:** (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III  
Mgt Superintendent); (b)(6)  
**Subject:** RE: PRELIMINARY CLEO TAB REPORT  
**Date:** Monday, May 16, 2016 12:32:50

---

(b)(6)

On the balancing issue, the requirement is balancing the systems to +/-5% of design/schedule values. If the unit is unable to perform within tolerance, then installation/equipment rework is necessary.

The reference to "Groups" below is purely for acceptance testing and NOT initial systems' balancing.

Respectfully,

(b)

(b)(6), EIT, PMP

Mechanical Acceptance Engineer

(b)(6) / DSN: (b)(6) / CELL (b)(6) / FAX (b)(6)

(b)(6)

-----Original Message-----

**From:** (b)(6) [mailto:(b)(6)]

**Sent:** Monday, May 16, 2016 12:30 PM

**To:** (b)(6) NAVFAC MIDLANT, CI; (b)(6) NAVFAC MIDLANT,  
ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

(b) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)

**Cc:** (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group  
III Mgt Superintendent); (b)(6)

**Subject:** [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT

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(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)

<mailto:(b)(6)>

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Sent: Monday, May 16, 2016 11:50 AM  
To: (b)(6) (NAVFAC); (b)(6)  
(b)(6) (NAVFAC Contract Spec); (b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
Subject: RE: PRELIMINARY CLEO TAB REPORT

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Sincerely,

(b)(6), P.E., CxA, LEED AP BD+C

CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Monday, May 16, 2016 11:28 AM  
To: (b)(6) (NAVFAC)  
(b)(6)  
(b)(6) (NAVFAC Contract Spec)  
(b)(6)  
(b)(6)  
Cc: (b)(6) (Group III Mgt.); (b)(6)  
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(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
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Sent: Tuesday, May 03, 2016 9:48 AM

To: (b)(6) (NAVFAC); (b)(6)  
(b)(6)

Cc: (b)(6) (Group III Mgt.); (b)(6) PM, Group III Management)

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CEMS Engineering Inc.

(b)(6)

Office (b)(6)

Cell (b)(6)

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Sent: Monday, May 2, 2016 5:28 PM

To: (b)(6) (NAVFAC)

(b)(6)

(b)(6)

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(b)(6) (PM, Group III Management) (b)(6)

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(b)(6)

Raleigh Division Manager / NEBB Professional



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**Cc:** (b)(6) Group III Mgt.: (b)(6) (PM, Group III Management): (b)(6) (Group III Mgt Superintendent): (b)(6)  
**Subject:** [Non-DoD Source] RE: PRELIMINARY CLEO TAB REPORT  
**Date:** Monday, May 16, 2016 12:29:49  
**Attachments:** image001.png

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(b)(6)

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(b)(6)

(b)(6) (NAVFAC Contract Spec)

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(b)(6)

Cc: (b)(6) (Group III Mgt.) (b)(6)

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(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[mailto:\(b\)\(6\)](#)>

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(b)(6)

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(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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-----Original Message-----

From: (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]  
Sent: Wednesday, April 20, 2016 1:58 PM  
To: (b)(6)  
Subject: Fw: 224887 Field TAB Report CLEO

(b)(6) -

Attached is the TAB field report. Please forward this to (b)(6) for his review and comments. We are sending this to our commissioning agent for his review and comments also ( he is copied on this email).

Please let us know what (b)(6) comments are as soon as possible so we can schedule the commissioning work.

-----Original Message-----

From: (b)(6)  
Sent: Wednesday, April 20, 2016 11:09 AM  
To: (b)(6)  
Subject: FW: 224887 Field TAB Report

(b)(6)

Raleigh Division Manager / NEBB Professional



**From:** (b)(6)  
**To:** (b)(6) [MCIEAST, Telecom Support Div.:](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune:](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune:](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune:](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune:](#) (b)(6)  
**Subject:** RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION  
**Date:** Monday, May 02, 2016 15:23:43

---

Good afternoon (b)(6) We'd prefer to turn over the CLEO Telecommunications this week and feel a final joint inspection is reasonable at this point. What do you think? Can we get it done this week? Thanks. R/

(b)(6) | Deputy Project Manager & Small Business Liaison | |  
311 Parachute Tower Road | Camp Lejeune, NC 28542 |  
Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
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-----Original Message-----

**From:** (b)(6) [\[mailto:\(b\)\(6\)\]](#)  
**Sent:** Monday, May 02, 2016 2:50 PM  
**To:** (b)(6)  
(b)(6)  
(b)(6)  
**Subject:** RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

We did everything but check the field ends. Would it be possible to just have my guys there with your and we can perform any repairs needed as they test everything? If not we can be back Friday morning to check the field end terminations. Thanks

(b)(6) RCDD  
General Manager  
Peerless Communications inc.  
Office (b)(6)  
Cell (b)(6)  
Fax (b)(6)  
Email: (b)(6)  
Website: [www.peerlesscom.com](http://www.peerlesscom.com)

-----Original Message-----

**From:** (b)(6) [\[mailto:\(b\)\(6\)\]](#)  
**Sent:** Monday, May 2, 2016 10:36 AM  
**To:** (b)(6)  
(b)(6)  
(b)(6)



(b)(6)

(b)(6)

(b)(6)

Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

Just checking on this

Were ports corrected?

(b)(6)

Lead Investigator / Inspector / IT Project Manager Base Telephone Building 25

(b)(6)

-----Original Message-----

From (b)(6) [mailto:(b)(6)]

Sent: Wednesday, April 27, 2016 2:38 PM

To: (b)(6)

(b)(6)

Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6)

(b)(6) will be on site in the morning. Can you get him short term pass?

Where does he need to go? Thanks

(b)(6)

, RCDD

General Manager

Peerless Communications inc.

Office (b)(6)

Cell (b)(6)

Fax (b)(6)

Email: (b)(6)

Website: www.peerlesscom.com

-----Original Message-----

From (b)(6) [mailto:(b)(6)]

Sent: Friday, April 22, 2016 7:14 AM

To: (b)(6)

(b)(6)

(b)(6)

Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)

We had some issues with the testing this week ...

Seems some of the wall outlets were tested before the faceplates were installed ....

Some of the CT couplers were reinstalled incorrectly, upside down, and failed near end crosstalk ...

Please advise

(b)(6)

Lead Investigator / Inspector / IT Project Manager Base Telephone Building

25

(b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Thursday, April 14, 2016 7:25 AM

To: (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)

(b)(6)  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

Ok, I'll schedule him and let you know. Probably first of next week.

Thanks

(b)(6), RCDD

General Manager

Peerless Communications inc.

Office (b)(6)

Cell (b)(6)

Fax (b)(6)

Email: (b)(6)

Website: www.peerlesscom.com

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Thursday, April 14, 2016 7:12 AM

To: (b)(6)  
<dkramer@Dragados-USA.com>; 'Martin Alos, Jose Ignacio'

(b)(6) (PM, Group III Management); (b)(6) (b)(6) (Group III Mgt Superintendent)

(b)(6)

(b)(6)

>  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

I can provide them now if he comes by then you can back fill me if you want to move forward ....

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]

Sent: Wednesday, April 13, 2016 5:02 PM

To: (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)

(b)(6)

Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6) said there was room. I ordered them, they should be here early next week. Thanks

(b)(6) RCDD  
General Manager  
Peerless Communications inc.  
Office (b)(6)  
Cell (b)(6)  
Fax (b)(6)  
Email: (b)(6)  
Website: www.peerlesscom.com

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 13, 2016 3:23 PM  
To: (b)(6)

(b)(6)  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6),

Big question is to install the Krone bracket per spec and attached will (b)(6) have to move the patch panels down ????

(b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 13, 2016 11:26 AM  
To: (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
(b)(6)  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6) I'll take this item from here. (b)(6) only requested that the 3 reports be labeled by-building (Admin, Classroom, Check-station). I did this on your old reports, burned them to a CD/RW, and delivered them back to (b)(6). Thanks. R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | |  
311 Parachute Tower Road | Camp Lejeune, NC 28542 |  
Phone: w (b)(6) | c (b)(6) | Email: (b)(6) Dragados USA, Inc. is An  
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attachments from your system and any copies you may have made, electronic or otherwise.

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 13, 2016 9:03 AM  
To: (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
(b)(6)  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6)

See the attached test report. Where did you say it says unspecified?  
Thanks

(b)(6), RCDD  
General Manager  
Peerless Communications inc.  
Office (b)(6)  
Cell (b)(6)  
Fax (b)(6)  
Email: (b)(6)  
Website: www.peerlesscom.com

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Wednesday, April 13, 2016 8:02 AM  
To: (b)(6)  
(b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent); (b)(6)  
(b)(6)  
Subject: RE: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

Yes that came up in the meeting yesterday ...  
Not a large issue but confusing ...

Also the titles at the bottom were untitled .. (b)(6) is adding a reference to them ....

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, April 12, 2016 3:07 PM  
To: (b)(6) (PM, Group III Management); (b)(6)  
Subject: [Non-DoD Source] RE: CLEO TELECOMM QC INSPECTION

(b)(6) discovered that I added the retest results to the original test results for the MDF and IDF 1. I amended the files and put them in the Box folder. Thanks

(b)(6), RCDD

General Manager

Peerless Communications inc.

Office (b)(6)

Cell (b)(6)

Fax (b)(6)

Email: (b)(6) <[\(b\)\(6\)](mailto:(b)(6))>

Website: [www.peerlesscom.com](http://www.peerlesscom.com) <<http://www.peerlesscom.com/>>

cid:image004.jpg@01D00188.56CE8720

<[http://intellasync.net/wp-content/uploads/2014/07/peerless\\_logo\\_final.gif](http://intellasync.net/wp-content/uploads/2014/07/peerless_logo_final.gif)>

From: (b)(6) [\(b\)\(6\)](mailto:(b)(6)) ]

Sent: Tuesday, April 12, 2016 2:29 PM

To: (b)(6)

PM, Group III Management)

(Group III Mgt Superintendent)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

Subject: RE: CLEO TELECOMM QC INSPECTION

Thanks for the walk through today,

Again things look much better than they were but are not ideal due to challenges with the type of construction.

-floor boxes look great

-cable management could use some cleaning up

-bonding had many loose connections and actual missing connections

-copper cross connects (Krone Blocks) were not per attached specification enclosures which are part of the 27 10 00

-power was not per specifications or enclosures

-faceplate locations all look great but functionality of work counters needs grommets for cabling to devices above the counter.

-DDC was missing a cable

All OSP cabling was tested good just need to validate the inside cabling from test reports submitted.

(b)(6)

Lead Investigator / Inspector / IT Project Manager

Base Telephone Building 25

(b)(6)

<<...>>

<<...>> <<...>> -----Original Appointment-----

From (b)(6) [mailto:(b)(6)]

Sent: Thursday, April 07, 2016 3:59 PM

To (b)(6) (PM, Group III Management);

(b)(6) (Group III Mgt Superintendent); (b)(6)

(b)(6)

Subject: [Non-DoD Source] CLEO TELECOMM QC INSPECTION

When: Tuesday, April 12, 2016 1:00 PM-1:30 PM (UTC-05:00) Eastern Time (US & Canada).

Where: CLEO site

Looks much better but still see some issues or areas of concern where cables

are mounted on top of and crossing other items ...

Will swing by for a closer look ...

**From:** (b)(6)  
**To:** (b)(6) (PM, Group III Management)  
**Cc:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Subject:** [Non-DoD Source] \*\* PENDING COST PROPOSALS FOR THE BELOW \*\*  
**Date:** Wednesday, April 27, 2016 16:04:07  
**Attachments:** [image001.png](#)

---

RE-SENDING – I forgot to include #7

(b)(6) I'd like to group the cost proposals. When will you have the remaining 4? Thanks. R (b)(6)

- 1) moving the wrong-way and over-speed boxes from the back wall of the gatehouse to the front desk (email/verbal)
- 2) completing the new electrical service to the Wilson Gate AVB (PCO-076)
- 3) bringing electrical service to the DDC panel in the mechanical room from the electrical room (RFI-335)
- 4) changing the VC electrical panel schedule to accommodate the TDSS (surge protector) (RFI-334)
- 5) vandalized broken bullet-proof glass in the 2 guard-booths – (RECV'D from G3)
- 6) bullet resistant door for the Wilson Gate Gatehouse, rm. 122. – (RECV'D from G3)
- 7) removal of CLEO VFD, add electrical disconnect, re-program controls

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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**From:** (b)(6)  
**To:** (b)(6) [PM, Group III Management](#)  
**Cc:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** [Non-DoD Source] \*\* PENDING COST PROPOSALS FOR THE BELOW \*\*  
**Date:** Wednesday, April 27, 2016 13:55:28  
**Attachments:** [image001.png](#)

---

(b)(6) I'd like to group the cost proposals. When will you have the remaining 4? Thanks. R (b)(6)

- 1) moving the wrong-way and over-speed boxes from the back wall of the gatehouse to the front desk (email/verbal)
- 2) completing the new electrical service to the Wilson Gate AVB (PCO-076)
- 3) bringing electrical service to the DDC panel in the mechanical room from the electrical room (RFI-335)
- 4) changing the VC electrical panel schedule to accommodate the TDSS (surge protector) (RFI-334)
- 5) vandalized broken bullet-proof glass in the 2 guard-booths – (RECV'D from G3)
- 6) bullet resistant door for the Wilson Gate Gatehouse, rm. 122. – (RECV'D from G3)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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**From:** (b)(6)  
**To:** (b)(6) (Group III Mgt Superintendent) (b)(6)  
[NAVFAC MIDLANT, ROICC Camp Lejeune](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** [Non-DoD Source] VIP TOUR OF CLEO

---

Good afternoon (b)(6). Please have all CLEO doors unlocked and the area swept clean, etc. by lunch on Tuesday, 3May. You can secure everything by 3pm. Thanks. R (b)(6)

(b)(6)

I will be giving (b)(6) (navy) and (b)(6) a tour of the CLEO building on Tuesday May 3rd at 1300. Please pass the word to your subcontractor and ensure all the buildings are open. This is just a brief walk through - no participation by you or your subcontractor is required.

Thanks,

(b)(6) PE  
Supervisory Construction Manager  
ROICC, Camp Lejeune, NC  
(b)(6)

**From:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**To:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Cc:** (b)(6)  
**Subject:** RE: RFI for Gatehouse door 122A  
**Date:** Friday, March 11, 2016 6:02:19

---

(b)(6)

Yes, that is correct. This will be required to be a bullet resistant door as it is an exterior door.

V/r,

(b)(6)  
CEC, USN  
Construction Manager

ROICC Camp Lejeune  
1005 Michael Road  
Camp Lejeune, NC 28547

-----  
Office (b)(6)  
Fax (b)(6)

-----Original Message-----

**From:** (b)(6) [mailto:(b)(6)]  
**Sent:** Thursday, March 10, 2016 2:25 PM  
**To:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Cc:** (b)(6)  
**Subject:** [Non-DoD Source] RE: RFI for Gatehouse door 122A

Good afternoon. This is just a note for the record that on Wednesday, 9Mar, we received direction from (b)(6) to proceed with ordering a bullet resistant door for the Wilson Gate Gatehouse, rm. 122. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<mailto:(b)(6)>

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From: (b)(6)  
Sent: Tuesday, March 08, 2016 11:14 AM  
To: (b)(6) (NAVFAC); (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC Contract Spec);  
(b)(6)  
(b)(6) (AMEC PM); (b)(6)  
Cc: (b)(6) (Dragados Senior Vice President); (b)(6) (Dragados QC Specialist); (b)(6) (Dragados QC Manager); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent)  
Subject: FW: RFI for Gatehouse door 122A  
Importance: High

RE-SENDING. Thanks. R/

(THIS ONE IS EASY)

Good morning (b)(6). I strongly encourage you to review the question being asked below question. My sub is getting out ahead of what later could be an issue. See attachment. Plans for the Wilson Gate Gatehouse show every door except for the exterior door to the NMCI room to be bullet resistant. The door (type F) is a windowless, steel door – not bullet resistant. The frame it goes in is already installed and is a blast-resistant frame. There are 2 options: 1) Install the non-bullet resistant door. This will require a modification to the frame to accommodate the hinges. No cost. 2) Order and install a bullet resistant door to match all of the other doors at the gatehouse. This will be a change order and will take 6-8 weeks to deliver once it is ordered. Please advise what you want to do. Thanks. R/ (b)(6)

From: (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, March 08, 2016 9:56 AM  
To: (b)(6)  
Subject: Fw: RFI for Gatehouse door 122A

(b)(6) -

Please see below. We have not had a response back on this. If they want a bullet door we need to know soon as it will take 6-8 weeks to deliver, once we order it.

From: (b)(6)  
Sent: Monday, February 22, 2016 6:18 PM  
To: (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC); (b)(6) (NAVFAC Contract Spec)  
Subject: FW: RFI for Gatehouse door 122A

RE-SENDING. Thanks. R/

From: (b)(6)  
Sent: Friday, February 19, 2016 3:04 PM  
To: (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC); (b)(6) (NAVFAC Contract Spec)  
Subject: FW: RFI for Gatehouse door 122A

Good afternoon (b)(6) – Will you please read the below and advise on how you want us to proceed?  
Thanks. R/ (b)(6)

(b)(6) – good job describing this in the most simple terms.

From: (b)(6) [mailto:(b)(6)] Door 122A is not noted as being a bullet resistant door. All of the other doors are bullet resistant, at the gatehouse (please see the door schedule on sheet A-601). This seems curious to us b/c this door leads into the NMCI room – probably the most critical room in the building! With that stated, the frame the supplier sent is bullet resistant. It has already been installed. The door is not bullet resistant and has not been installed. We have 2 options here:

- 1) Install the non-bullet resistant door. This will require a modification to the frame to accommodate the hinges. No cost.
- 2) Order and install a bullet resistant door to match all of the other doors at the gatehouse. This will be a change order.

**From:** (b)(6)  
**To:** (b)(6)  
**Cc:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** [Non-DoD Source] Fwd: ROADWAY LIGHTS ON AT WILSON GATE  
**Date:** Thursday, March 10, 2016 17:35:28

---

(b)(6), pls have (b)(6) give me a call about this light at the Wilson Gate. Thanks. R/ (b)(6)

(b)(6)  
Deputy Project Manager  
Dragados USA, Camp Lejeune  
Sent from my iPhone

Begin forwarded message:

**From:** (b)(6)  
**Date:** March 10, 2016 at 5:11:21 PM EST  
**To:** (b)(6)  
**Cc:** (b)(6) (Group III Mgt Superintendent); (b)(6)  
(b)(6)  
**Subject:** Re: ROADWAY LIGHTS ON AT WILSON GATE

(b)(6) I investigated this issue with the pole light not working on the inbound lane. The problem is something is shorting out in the pole light head. The pole lights have fuses in them at the base of the pole. We have power coming to the fuse holder in the light and I changed the fuse 3 times and it blew every time which means something is shorting out from the base up the pole.

(b)(6)  
JT Yates Electric Service  
(b)(6)

On Mar 9, 2016, at 9:18 AM, (b)(6) (b)(6) wrote:

Good morning (b)(6) Please look into this. Thanks. R/ (b)(6)

-----Original Message-----

From (b)(6) [mailto:(b)(6)]

Subject: RE: ROADWAY LIGHTS ON AT WILSON GATE

(b)(6)

I'm sure you have already gotten this, but just in-case, the light in the front right-hand side (as you are entering Wilson gate) did not come on last night. Not sure if the bulb is burnt out or something else, just wanted to pass it along. Thank you!

Company Commander

Military Police Company



**From:** (b)(6)  
**To:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Cc:** (b)(6)  
**Subject:** [Non-DoD Source] RE: RFI for Gatehouse door 122A  
**Date:** Thursday, March 10, 2016 14:28:53  
**Attachments:** [image001.png](#)

---

Good afternoon. This is just a note for the record that on Wednesday, 9Mar, we received direction from (b)(6) to proceed with ordering a bullet resistant door for the Wilson Gate Gatehouse, rm. 122. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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**From:** (b)(6)  
**Sent:** Tuesday, March 08, 2016 11:14 AM  
**To:** (b)(6) (NAVFAC); (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC Contract Spec); (b)(6) (AMEC PM); (b)(6)  
**Cc:** (b)(6) (Dragados Senior Vice President); (b)(6) (Dragados QC Specialist); (b)(6) (Dragados QC Manager); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent)  
**Subject:** FW: RFI for Gatehouse door 122A  
**Importance:** High

RE-SENDING. Thanks. R/

(THIS ONE IS EASY)

Good morning (b)(6) I strongly encourage you to review the question being asked below question. My sub is getting out ahead of what later could be an issue. See attachment. Plans for the Wilson Gate Gatehouse show every door except for the exterior door to the NMCI room to be bullet resistant. The door (type F) is a windowless, steel door – not bullet resistant. The frame it goes in is already installed and is a blast-resistant frame. There are 2 options: 1) Install the non-bullet resistant door. This will require a modification to the frame to accommodate the hinges. No cost. 2) Order and install a bullet resistant door to match all of the other doors at the gatehouse. This

will be a change order and will take 6-8 weeks to deliver once it is ordered. Please advise what you want to do.  
Thanks. R/ (b)(6)

From (b)(6) [mailto:(b)(6)]  
Sent: Tuesday, March 08, 2016 9:56 AM  
To (b)(6)  
Subject: Fw: RFI for Gatehouse door 122A

(b)(6) -

Please see below. We have not had a response back on this. If they want a bullet door we need to know soon as it will take 6-8 weeks to deliver, once we order it.

From (b)(6)  
Sent: Monday, February 22, 2016 6:18 PM  
To: (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC); (b)(6) (NAVFAC Contract Spec)  
Subject: FW: RFI for Gatehouse door 122A

RE-SENDING. Thanks. R/

From (b)(6)  
Sent: Friday, February 19, 2016 3:04 PM  
(b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC); (b)(6) (NAVFAC Contract Spec)  
Subject: FW: RFI for Gatehouse door 122A

Good afternoon (b)(6) – Will you please read the below and advise on how you want us to proceed?  
Thanks. R/ (b)(6)

(b)(6) – good job describing this in the most simple terms.

From (b)(6) [mailto:(b)(6)]

Door 122A is not noted as being a bullet resistant door. All of the other doors are bullet resistant, at the gatehouse (please see the door schedule on sheet A-601). This seems curious to us b/c this door leads into the NMCI room – probably the most critical room in the building! With that stated, the frame the supplier sent is bullet resistant. It has already been installed. The door is not bullet resistant and has not been installed. We have 2 options here:

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cost.

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**From:** (b)(6)  
**To:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** [Non-DoD Source] FW: RFI for Gatehouse door 122A  
**Date:** Tuesday, March 08, 2016 14:56:49  
**Attachments:** [image001.png](#)  
[WILSON GATEHOUSE NMCI DOOR.pdf](#)  
**Importance:** High

---

Good afternoon (b)(6) Is anyone on your team considering this email? Thanks. R/

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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Sent: Tuesday, March 08, 2016 11:14 AM  
To: (b)(6) (NAVFAC); (b)(6) (NAVFAC inbound OICC); (b)(6) (NAVFAC Contract Spec);  
(b)(6)  
(b)(6) (AMEC PM); (b)(6)  
Cc: (b)(6) (Dragados Senior Vice President); (b)(6) (Dragados QC Specialist); (b)(6) (Dragados QC Manager); (b)(6) (PM, Group III Management); (b)(6) (Group III Mgt Superintendent)  
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(b)

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To: (b)(6)  
Subject: Fw: RFI for Gatehouse door 122A

(b)(6)

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From (b)(6)  
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Subject: FW: RFI for Gatehouse door 122A

RE-SENDING. Thanks. R/

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Sent: Friday, February 19, 2016 3:04 PM  
To: (b)(6) NAVFAC inbound OICC; (b)(6) (NAVFAC); (b)(6) (NAVFAC Contract Spec)  
Subject: FW: RFI for Gatehouse door 122A

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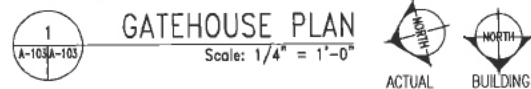
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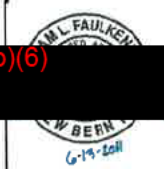
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APPLY THIS SHEET ONLY

- APPLY THIS SHEET ONLY.

- (b)(6)



APPROVED

**Abstract**

DLS	DLG	DRN DLG/IMP	CHK	WLF
IN/CM				

DEPUTY PM/DM

CON-  
NT  
NORF  
WILLER

ENGINEERING  
ID/AL  
JACK  
(C)

## USE YOUR FACILITIES

**CC**

NE  
P  
E  
HON

EN	MP	MC	B	GA
----	----	----	---	----

NAME: \_\_\_\_\_  
 ID: \_\_\_\_\_  
 DATE: \_\_\_\_\_

CONFIDENTIAL

DE	MC	MA	
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CONST. CONTR. NO.

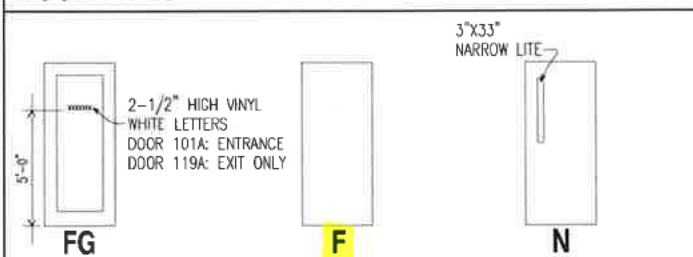
SHEET 516 OF 1049

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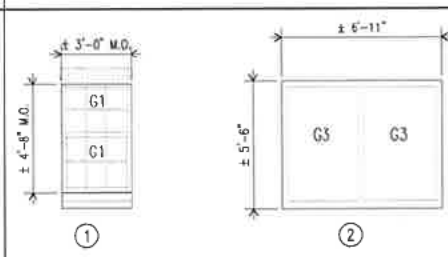


12/27/2011  
S:\projects\2009\0901 - CL - Sub to MACTEC-R&K - New Base Entry Point & Road\deliverables\2011.12.27 COM fire rating\12593052.dwg  
perry

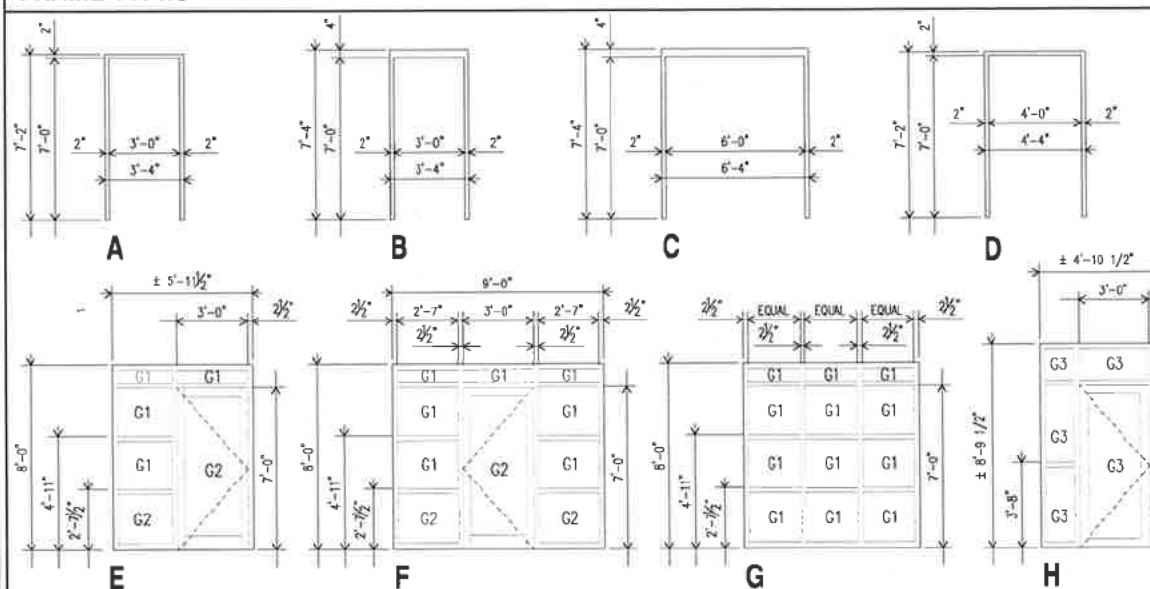
## DOOR TYPES



## WINDOW TYPES



## FRAME TYPES



### GLAZING LEGEND:

- G1: BLAST-RESISTANT INSULATED GLAZING: EXTERIOR LITE OF FLOAT GLASS, INTERIOR LITE LAMINATED  
G2: BLAST-RESISTANT INSULATED GLAZING: EXTERIOR LITE OF TEMPERED GLASS, INTERIOR LITE LAMINATED  
G3: BULLET RESISTANT INSULATED GLAZING

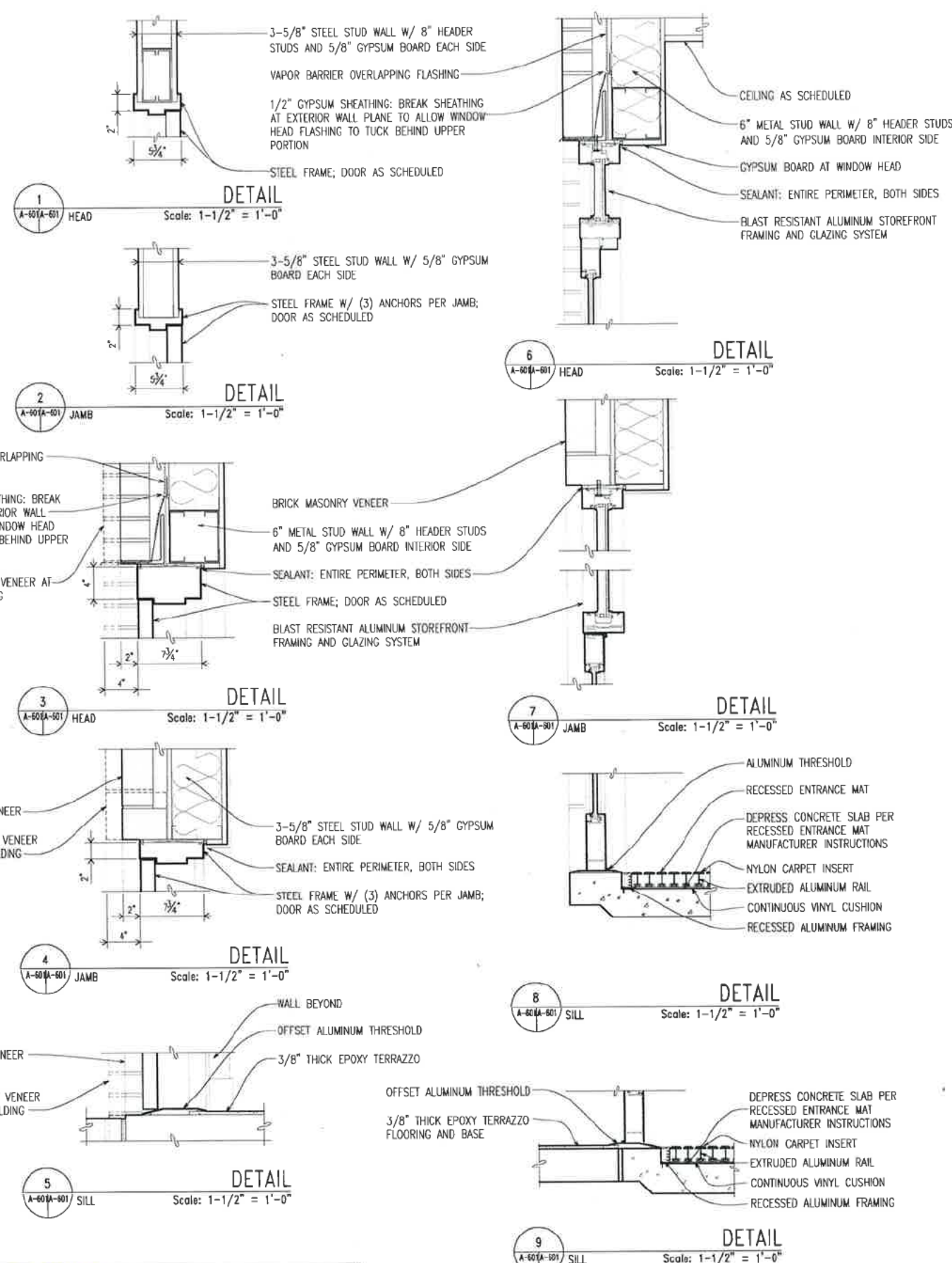
## DOOR SCHEDULE

NOTE: SILL DETAIL OMITTED IF FLOORING IS CONTINUOUS ON EACH SIDE OF DOOR.

MARK	DOOR	TYPE	WIDTH	HT.	THK.	MATERIAL	GLAZING	HW SET	FRAME			REMARKS	FIRE RATING (WHERE APPLICABLE)
									TYPE	DETAILS:	MATERIAL		
									HEAD	JAMB	SILL		
VISITORS CENTER													
101A	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				F	6/A-601	7/A-601	8/A-601	ALUM.
102A	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				E	6/A-601	7/A-601	9/A-601	ALUM.
102B	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				E	6/A-601	7/A-601	9/A-601	ALUM.
106A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
107A	F	3'-0"	7'-0"	1'-3/4"	STEEL				B	3/A-601	4/A-601	6/A-602	STEEL
108A	F	3'-0"	7'-0"	1'-3/4"	STEEL				B	3/A-601	4/A-601	6/A-602	STEEL
109A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
110A	F	4'-0"	7'-0"	1'-3/4"	WOOD				D	1/A-601	2/A-601		STEEL
111A	N	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
112A	N	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
113A	N	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
114A	N	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
114B	F	3'-0"	7'-0"	1'-3/4"	STEEL				B	3/A-601	4/A-601	5/A-601	STEEL
115A	N	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601		STEEL
116A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	1/A-601	2/A-601	5/A-602	STEEL
117A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	2/A-602	3/A-602		STEEL
118A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	2/A-602	3/A-602		STEEL
119A	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				F	6/A-601	7/A-601	8/A-601	ALUM.
GATEHOUSE													
121A	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				H	1/A-603	1/A-603	1/A-603	ALUM.
121B	FG	3'-0"	7'-0"	1'-3/4"	ALUM.				H	1/A-603	1/A-603	1/A-603	ALUM.
122A	F	3'-0"	7'-0"	1'-3/4"	STEEL				B	3/A-601	4/A-601	6/A-602	STEEL
123A	F	3'-0"	7'-0"	1'-3/4"	STEEL				C	3/A-601	4/A-601	6/A-602	STEEL
124A	F	3'-0"	7'-0"	1'-3/4"	STEEL				B	3/A-601	4/A-601	6/A-602	STEEL
125A	F	3'-0"	7'-0"	1'-3/4"	WOOD				A	2/A-602	3/A-602		STEEL

### DOOR SCHEDULE REMARKS:

1. DOOR, FRAME, AND HARDWARE SHALL BE BULLET RESISTANT IN ACCORDANCE WITH UL SPSA OF UL 752 LEVEL III



MAUNE BELANGIA FAULKENBERRY ARCHITECTS, P.A.  
1114 Albemarle Street, New Bern, NC 28560  
Tel: 252.637.1373 Fax: 252.637.3335  
www.mbfarchitects.com

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC  
NAVAL STATION WOODLIE, VA  
JACKSONVILLE, NC  
FY12 MCON P1383 (BASE BID)  
NEW BASE ENTRY POINT  
DOOR SCHEDULE  
HEAD, JAMB, AND SILL DETAILS

SCALE: AS NOTED  
PROJECT NO: P1383  
CONSTR. CONTR. NO:  
NAVFAC DRAWING NO: 12593052  
SHEET 54.1 OF 1049  
A-601

**From:** (b)(6)  
**To:** (b)(6)  
**Cc:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#) (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Subject:** [Non-DoD Source] Fwd: ROADWAY LIGHTS ON AT WILSON GATE  
**Date:** Thursday, March 10, 2016 17:35:28

---

Hugh, pls have (b)(6) give me a call about this light at the Wilson Gate. Thanks. R/ (b)(6)

(b)(6)  
Deputy Project Manager  
Dragados USA, Camp Lejeune  
Sent from my iPhone

Begin forwarded message:

From (b)(6) >  
Date: March 10, 2016 at 5:11:21 PM EST  
To: (b)(6) >  
Cc: (b)(6) (Group III Mgt Superintendent) (b)(6)  
(b)(6)  
Subject: Re: ROADWAY LIGHTS ON AT WILSON GATE

(b)(6) I investigated this issue with the pole light not working on the inbound lane. The problem is something is shorting out in the pole light head. The pole lights have fuses in them at the base of the pole. We have power coming to the fuse holder in the light and I changed the fuse 3 times and it blew every time which means something is shorting out from the base up the pole.

(b)(6)  
JT Yates Electric Service  
(b)(6)

On Mar 9, 2016, at 9:18 AM, (b)(6) (b)(6) > wrote:

Good morning (b)(6). Please look into this. Thanks. R/ (b)(6)

-----Original Message-----



From (b)(6) [mailto:(b)(6)]

Subject: RE: ROADWAY LIGHTS ON AT WILSON GATE

(b)(6)

I'm sure you have already gotten this, but just in-case, the light in the front right-hand side (as you are entering Wilson gate) did not come on last night. Not sure if the bulb is burnt out or something else, just wanted to pass it along. Thank you!

Company Commander

Military Police Company

**From:** (b)(6)  
**To:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Cc:** (b)(6)  
**Subject:** [Non-DoD Source] RE: RFI for Gatehouse door 122A  
**Date:** Thursday, March 10, 2016 14:28:53  
**Attachments:** [image001.png](#)

---

Good afternoon. This is just a note for the record that on Wednesday, 9Mar, we received direction from (b)(6) to proceed with ordering a bullet resistant door for the Wilson Gate Gatehouse, rm. 122. Thanks. R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | d (b)(6) | Email: (b)(6)  
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**Importance:** High

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(b)(6)  
(b)(6) (PM, Group III Management); (b)(6)  
(b)(6) (Group III Mgt Superintendent)  
**Subject:** [Non-DoD Source] FW: RFI for Gatehouse door 122A  
**Date:** Tuesday, March 08, 2016 11:16:40  
**Attachments:** [WILSON GATEHOUSE NMCI DOOR.pdf](#)  
**Importance:** High

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(b)(6) – good job describing this in the most simple terms.

From (b)(6) [[\(mailto:\(b\)\(6\)\)](mailto:(b)(6))]

Door 122A is not noted as being a bullet resistant door. All of the other doors are bullet resistant, at the gatehouse (please see the door schedule on sheet A-601). This seems curious to us b/c this door leads into the NMCI room – probably the most critical room in the building! With that stated, the frame the supplier sent is bullet resistant. It has already been installed. The door is not bullet resistant and has not been installed. We have 2 options here:

- 1) Install the non-bullet resistant door. This will require a modification to the frame to accommodate the hinges. No cost.
- 2) Order and install a bullet resistant door to match all of the other doors at the gatehouse. This will be a change order.



From: (b)(6)  
To: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
Subject: [Non-DoD Source] FW: \*\* UPDATE - WILSON GATE ELECTRICAL \*\*  
Date: Thursday, March 03, 2016 15:18:26  
Attachments: [image001.png](#)  
[FW JV response to P13834 RFI 331.msg](#)  
[RE WILSON GATE ELECTRICAL - AVB HEAT TRACE.msg](#)  
[AVB OM MANUALS.msg](#)  
[WILSON GATE AVB ELECTRICAL SCHEMATICS.msg](#)  
[WILSON GATE AVB CONTACT INFO.msg](#)

---

FYI. R/

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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From: (b)(6)  
Sent: Thursday, March 03, 2016 3:02 PM  
To: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) (AMEC (b)(6)  
(b)(6)  
Cc: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC  
MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC  
MIDLANT, ROICC Camp Lejeune; (b)(6) (Dragados Senior Vice President); (b)(6) (Dragados QC  
Specialist); (b)(6) (Dragados QC Manager); (b)(6), Group III Management; (b)(6)  
(Group III Mgt Superintendent); (b)(6) (Dragados USA)  
Subject: \*\* UPDATE - WILSON GATE ELECTRICAL \*\*

Good afternoon (b)(6) I looked into this this morning. Below is where we are.

- Duke Progress Energy transformers are energized and high voltage cable is running from them to the panels on the sides of the VC and the Gatehouse. Both panels have lockout/tagouts on them.
- Today, my sub is pulling Automatic Transfer Switch (ATS) control wires to the generators. This will be complete by Monday.

- All the street light wire has been pulled already.

- Before we request an inspection from (b)(6) (NAVFAC) my sub is supposed to have the AVB wires pulled into the MDP - This is a potential delay that I previously alerted you to. The AVB power is wrong according to our contract documents. We had several power conflicts with the AVB before we submitted a RFI on this. The initial designer (CEMS) response is attached to this email (AVB heat trace). They won't accept responsibility because "at the time of the design, the manufacturer of the AVB and heat trace was not known and the 480V connection was based on another manufacturer." I then sent RFI-331 and received from LT Adcock a second designer response which says "as a result of a third party installation of the AVB without any input or engineering from the JV – CEMS is not able to comment on the required electrical connections." I then received an email from the OICC on 26Feb asking me what I can do to fix this. I took the following steps:

- o I personally went to the AVB and copied the manufacturer's information off the side and called them and was able to reach the guy who actually installed the devices at the Wilson Gate (b)(6), see attached email for contact information). He sent me the electrical schematics (see attached email) for the AVBs which indicate our plans are way off from being able to support the AVBs. According to the manufacturer, the AVBs should have the following electrical service:

- 208V 3ph power (4 circuits, one per pump)

- 208V 1ph power (7 circuits, one per heat mat)

- 120V 1ph power (8 circuits, two per pump)

- o I requested copies of the AVB O&M manuals several times from NAVFAC and haven't received them (see attached)

- o Additionally, I have called back the manufacturer and asked them for options. Any solution offered by them goes beyond any authority I have so I have to kick this back to you.

AVB issues aside, if you want the lights at the Wilson Gate sooner and you want to waive the AVB tie-in during (b)(6) inspection of the MDP panel (your call) you can have the lights in about a week. Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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-----Original Message-----

From: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune [[mailto:\(b\)\(6\)](#)]

Sent: Thursday, March 03, 2016 1:50 PM

To: (b)(6)

Cc: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC  
MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
(b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC  
MIDLANT, ROICC Camp Lejeune

Subject: Power at Visitor's Center - Canopy

(b)(6) - When will power be on at the Wilson Gate?

ROICC Team - please review and provide input on when you think power will be on.

Thanks,

(b)(6), PE

Supervisory Construction Manager

ROICC, Camp Lejeune, NC

(b)(6)



amec  
foster  
wheeler

**From:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**To:** (b)(6)  
**Cc:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
**Subject:** FW: JV response to P1383/4 RFI 331  
**Date:** Friday, February 26, 2016 14:29:29  
**Attachments:** [116022617331202439.jpg](#)  
[P1383\\_4 RFI 331 Response.pdf](#)

---

(b)(6),

See attached response from the AE on RFI 331. Please address and let me know what you can do to fix.

V/r,

(b)(6)  
CEC, USN  
Construction Manager

ROICC Camp Lejeune  
1005 Michael Road  
Camp Lejeune, NC 28547

-----  
Office (b)(6)  
Fax (b)(6)

-----Original Message-----

From: (b)(6) [mailto:(b)(6)]  
Sent: Friday, February 26, 2016 12:33 PM  
To: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
Cc: (b)(6) NAVFAC MIDLANT, IPTMC; (b)(6) NAVFAC MIDLANT, IPTMC; (b)(6) NAVFAC MIDLANT, IPTMC  
Subject: [Non-DoD Source] JV response to P1383/4 RFI 331

(b)(6)

See attached JV response to P1383/4 RFI No. 331 regarding the AVB motor voltage.

Regards,

(b)(6), PE

Associate Engineer

AMEC Foster Wheeler Environment & Infrastructure, Inc.

8745 W. Higgins Rd, Suite 300

Chicago, IL 60631

O (b)(6)

D (b)(6)

M (b)(6)

E (b)(6)

amecfw.com

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## MACTEC/RKK Joint Venture

---

### Response to Request for Information - P1383/4 New Base Entry Road and Base Entry Point

DATE:	26 February 20	(b)(6)
FROM:	(b)(6)	(b)(6)
SUBJECT:	RESPONSE MEMO: RFI No. 331	
TO:	(b)(6)	OICC MCI East, MCB Camp Lejeune
COPY TO:	(b)(6)	PE – NAVFAC PM; (b)(6) NAVFAC

Listed below is the MACTEC/RKK JV response to P1383/4 RFI 331 regarding the AVB control motor voltage.

The JV disapproved the first and only shop drawing received for the automated vehicle barrier (AVB) system because of concerns it did not meet the construction drawing intent. As a result, a third party installed the AVB without any input or engineering or approval from the JV. We have never received any documentation on the installed barrier, therefore, we're not able to comment on the required electrical connections.



From: (b)(6)  
To: (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6) .NAVFAC MIDLANT, ROICC Camp Lejeune  
Cc: (b)(6)  
Subject: AVB O&M MANUALS  
Attachments: [image001.png](#)

---

RE-SENDING: Good afternoon (b)(6) . Please see below email from (b)(6) . Might you still have the 7 copies of the Wilson Gate O&M manuals?

From: (b)(6)  
Sent: Tuesday, June 23, 2015 4:18 PM  
To: (b)(6) )  
Cc: (b)(6) (PM, Group III Management); (b)(6) (Yates Electric); (b)(6) (Group III Superintendent); (b)(6) (Dragados USA QC Specialist)  
Subject: FW: TRANSMITTAL 1064, RFI-284, SECURITY PANELS CONTROLLED FROM GATEHOUSE

Good afternoon (b)(6) . I have the 2 AVB controllers from (b)(6) . I would like to get 1 of the manuals from you if it is available. Thanks. R (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[<mailto:\(b\)\(6\)>](mailto:(b)(6))>

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From: (b)(6) [[mailto:\(b\)\(6\)](#)]  
Sent: Tuesday, June 23, 2015 12:27 PM  
To: (b)(6)  
Cc: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune  
Subject: RE: TRANSMITTAL 1064, RFI-284, SECURITY PANELS CONTROLLED FROM GATEHOUSE

(b)(6)

I spoke to (b)(6) and he said that he turned over 7 manuals to the government and he thought (b)(6) had at least 4 of them. You might touch base with (b)(6) to see if he can give you one to see if it contains the info you need regarding hook-up instructions.

(b)(6) PE | Construction Manager

Amec Foster Wheeler

Environment and Infrastructure

Cell (b)(6)

From: (b)(6) [mailto:\(b\)\(6\)@amec.com](mailto:(b)(6)@amec.com) ]  
Sent: Monday, June 22, 2015 5:42 PM  
To: (b)(6) (NAVFAC inbound OICC); (b)(6) (MBF Architects); (b)(6) (b)(6)  
<[mailto:\(b\)\(6\)@amec.com](mailto:(b)(6)@amec.com)>; (b)(6) (PM, Group III Management); (b)(6) (b)(6)  
<[mailto:\(b\)\(6\)@amec.com](mailto:(b)(6)@amec.com)>; (b)(6) (Yates Electric); (b)(6) (b)(6) Group III Superintendent)  
Subject: TRANSMITTAL 1064, RFI-284, SECURITY PANELS CONTROLLED FROM GATEHOUSE

Good afternoon. See attached RFI-284 which asks about the AVB controller panels and other security panels controlled in the gatehouse. See attached photos A, B, & C and plan sheet EP102

Contractor is in receipt from the government of 3 electrical boxes related to the security features controlled from inside the Wilson Gate gatehouse. Two of them are AVB controllers but there is no paperwork, no instructions, no labeling, and no way to identify the items. See photo-A and please identify what each item is using the legend descriptions found on EP102 (AVB, SP, WW, ESS).

Plan sheet EP102 (see attached) shows panels labeled: AVB (AVB control panel), SP (speed control panel), WW (wrong way detector control panel), and ESS. There is no entry in the legend identifying ESS. What is this?

I have 3 physical panels and am supposed to have 4. What am I missing and who provides it?

See attached photo-B. These are 2 similar control panels. The one on the right has a cable access in the lower left corner. The other one has no access on any side. Request instructions for installation of this panel.

See attached photo-C which shows 1 of the 2 similar control boxes held up to the wall in a vertical mounted position. This does not seem right. It would seem more logical for it to be mounted horizontally as on a table or shelf but this is not the case. See sheet A104 which shows a re-cycling area and a doorway where the panels are to be mounted. How do you want these mounted? At what height off the floor?

Thanks. R/

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

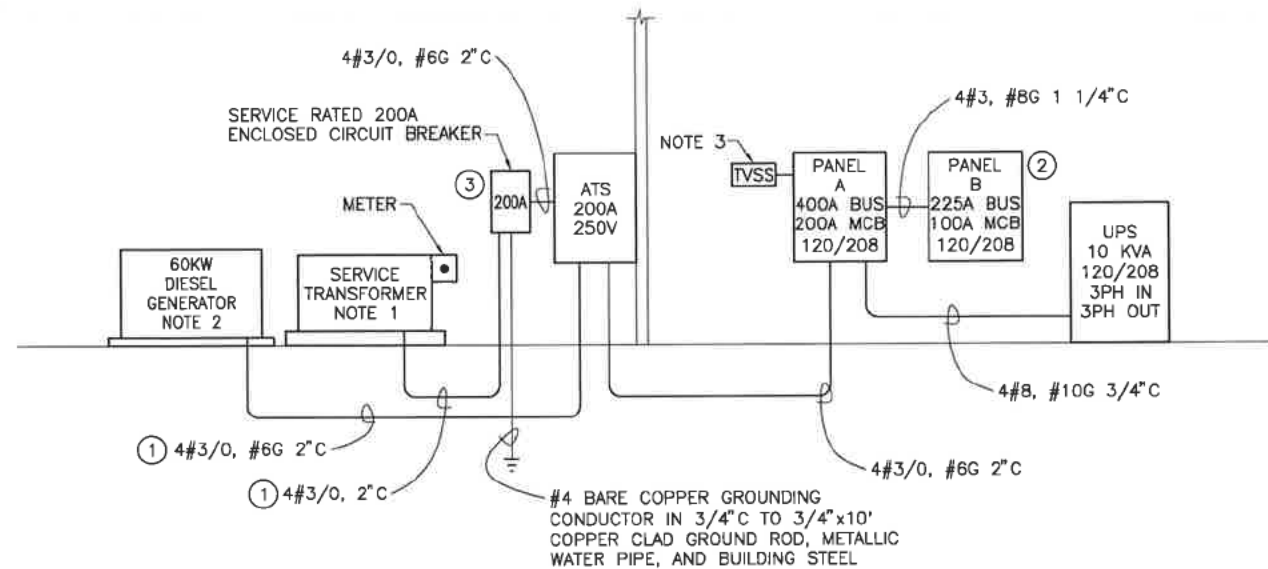
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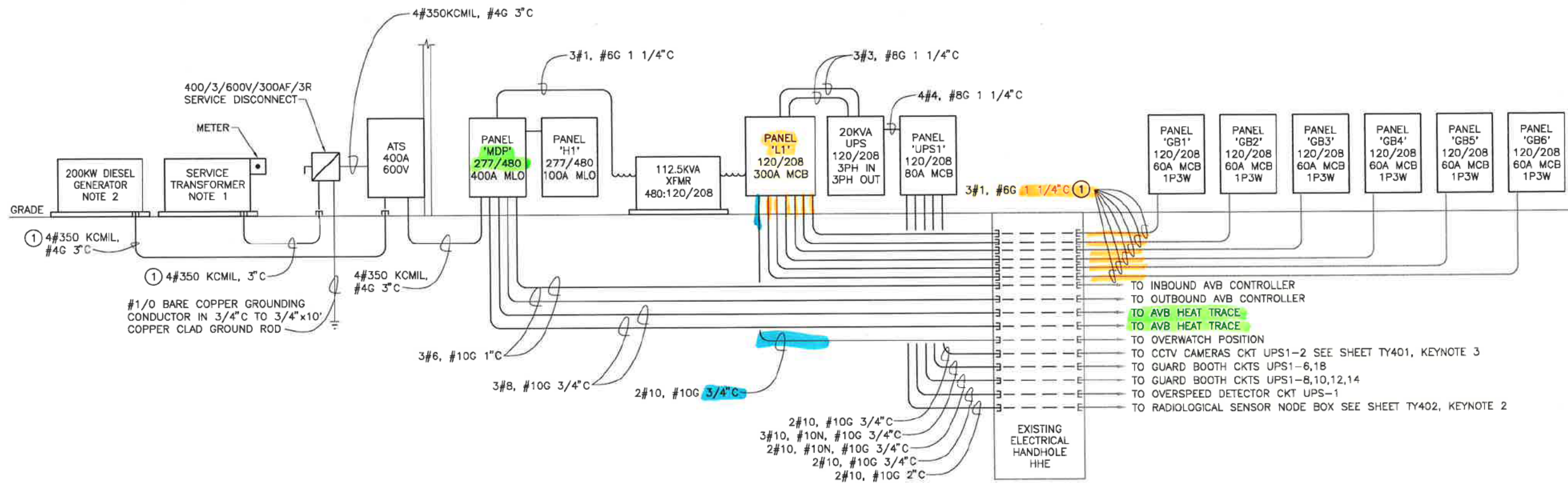
**VISITORS CENTER ELECTRICAL RISER DIAGRAM**  
SCALE: NOT TO SCALE

# **GENERAL NOTES:**

- UTILITY TRANSFORMER TO BE PROVIDED AND INSTALLED BY PROGRESS ENERGY.
- PROVIDE SKID MOUNTED FUEL TANK WITH ENOUGH CAPACITY FOR 12 HOURS OF OPERATION.
- TVSS (TRANSIENT VOLTAGE SUPPRESSION SYSTEM) PROVIDE A MINIMUM OF A 80,000 AMP PER PHASE TVSS SYSTEM FOR L-N, L-L AND L-G PROTECTION (MEETS ANSI/IEEE C 62.45). MOUNT AS CLOSE AS POSSIBLE TO PANELBOARD.

## **KEY NOTES:**

- INSTALL NEW CONDUCTORS IN EXISTING CONDUIT. EXISTING CONDUIT INSTALLED IN SEPARATE CONTRACT.
- MAIN CIRCUIT BREAKER FOR PANEL B SHALL BE PERMANENTLY MARKED AS THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS.
- INSTALL A PLACARD AT THE BUILDING MAIN DISCONNECT STATING "WARNING-ELECTRIC SHOCK HAZARD. DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION. DISCONNECTING MEANS FOR PHOTOVOLTAIC SYSTEM IS THE MAIN CIRCUIT BREAKER IN PANEL B, LOCATED IN ROOM 108".



**GATEHOUSE ELECTRICAL RISER DIAGRAM**  
SCALE: NOT TO SCALE

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16	NO. 17	NO. 18	NO. 19	NO. 20
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION

**NAVFAC**

(b)(6)

**C/E M/S**

ENGINEERING

CHS Engineering Inc.  
2009 Top Lane Drive  
Lorton, VA 22079  
(703) 441-3037  
(703) 441-3038  
www.chs-engineering.com  
CHS Project #1000  
Project Manager: C. Hinson

APPROVED	DATE
FOR COMMANDER NAFC	
ACTIVITY	
DESIGNED BY	DATE
CHECKED BY	DATE
BRANCH MANAGER	
CHIEF ENGINEER	
DEPUTY CHIEF	

DEPARTMENT OF THE NAVY

**NAVAL FACILITIES ENGINEERING COMMAND - MIDLANTIC**

NAVAL STATION - NORFOLK, VA

JACKSONVILLE, NC

**FY12 MCON P1383 (BASE BID)**

**NEW BASE ENTRY POINT**

RISER DIAGRAMS

SCALE	AS NOTED
PROJECT NO.	P1383
CONTRACT	CONTRACT NO.
NAVJAG DRAWING NO.	12593125
SHEET	614 OF 1049
<b>EP603</b>	

**From:** (b)(6)  
**To:** (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [AMEC PM](#); (b)(6) [MCI EAST, I&E/IDD](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#); (b)(6) [NAVFAC MIDLANT, ROICC Camp Lejeune](#)  
**Cc:** (b)(6) [Yates Electric](#); (b)(6) [\(PM, Group III Management\)](#) (b)(6) [\(Group III Superintendent\)](#); (b)(6)  
**Subject:** RE: WILSON GATE ELECTRICAL - AVB HEAT TRACE  
**Date:** Tuesday, January 19, 2016 9:16:42  
**Attachments:** [image003.png](#)

---

Please connect to panel L1. At the time of the design, the manufacturer of the AVB and heat trace was not known and the 480V connection was based on another manufacturer.

(b)(6), P.E.

Vice President, Principal Electrical Engineer

(b)(6) <[mailto:\(b\)\(6\)](#)>

P: (b)(6) Ext. 106

CEMS Engineering | Architecture

[www.CEMSengineering.com](#) <<http://www.cemsengineering.com/>>

cid:image001.jpg@01CF7429.0D4A2D80

**From:** (b)(6) [[mailto:\(b\)\(6\)](#)]  
**Sent:** Wednesday, January 13, 2016 12:46 PM  
**To:** (b)(6) (NAVFAC inbound OICC); (b)(6); (b)(6); (b)(6) (AMEC PM); (b)(6); (b)(6); (b)(6) (MCI East); (b)(6) (NAVFAC Contract Spec); (b)(6); (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune; (b)(6)  
**Cc:** (b)(6); (b)(6) (PM, Group III Management); (b)(6); (b)(6) (Group III Superintendent); (b)(6)  
**Subject:** WILSON GATE ELECTRICAL - AVB HEAT TRACE

Good afternoon. Please see the attachment. EP601 indicates that the AVB heat trace is to enter the MDP panel which is 277/480 voltage. The attached photos show the AVB heat trace data plate which calls for 120 volt.

Q: Do you want the AVB heat trace (120 volt) connected to the MDP panel (277 volt)? My electrical subcontractor



recommends connecting in adjacent panel L1 which has spares in it (see again EP601). Cost, if any, is minimal.

Thanks. R. (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | c (b)(6) | Email: (b)(6)  
<[\(b\)\(6\)](mailto:(b)(6))>

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**From:** (b)(6)  
**To:** (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune: (b)(6) NAVFAC MIDLANT, ROICC Camp Lejeune: (b)(6) MCIEAST, I&EVIDD  
**Cc:** (b)(6)  
**Subject:** WILSON GATE AVB ELECTRICAL SCHEMATICS  
**Attachments:** [image001.png](#)  
[SCAN\\_003854.pdf](#)  
**Importance:** High

---

Good afternoon (b)(6). Attached are the electrical schematics I requested from the installer of the Wilson Gate AVBs (installed by others). Request your review of this and direction to Dragados on how you wish for us to proceed with bringing electric service to the AVBs.

Do you have the O&M manuals that came with the install? If so, may I have a copy please? Thanks. R/ (b)(6)

(b)(6) | Deputy Project Manager & Small Business Liaison | cid:image001.png@01CCA871.8C8E7960 |

311 Parachute Tower Road | Camp Lejeune, NC 28542 |

Phone: w (b)(6) | d (b)(6) | Email: (b)(6)  
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**From:** (b)(6) [[\(b\)\(6\)](mailto:(b)(6))]  
**Sent:** Monday, February 22, 2016 11:43 AM  
**To:** (b)(6)  
**Subject:** Wedge Information You Requested

Attached you will find the drawing that was provided by us during construction. You will note that you need the following for power...

208V 3ph power (4 circuits, one per pump)

208V 1ph power (7 circuits, one per heat mat)

120V 1ph power (8 circuits, two per pump)

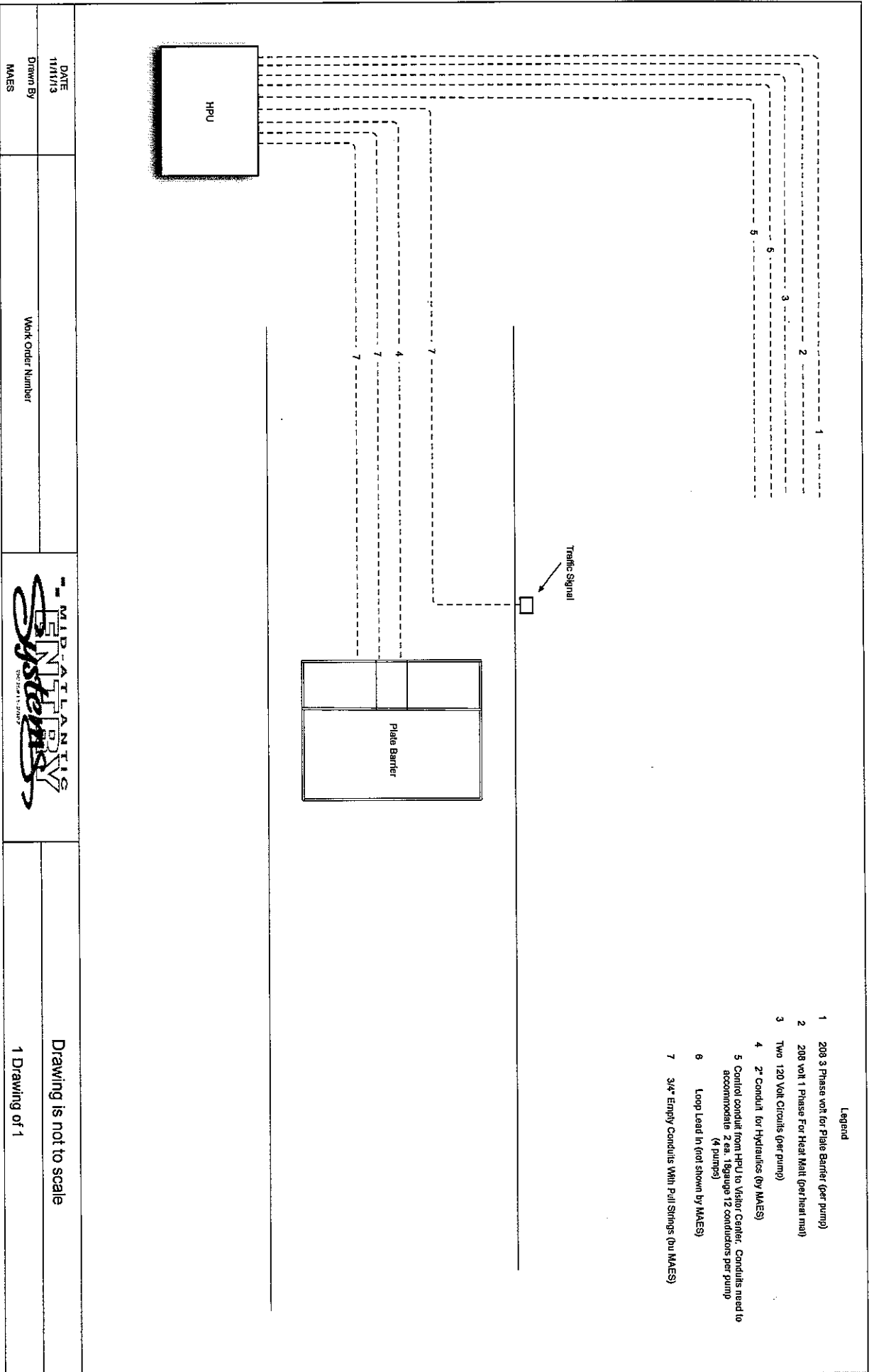
Please let me know if you have any questions or if I can be of any assistance.

(b)(6), CAGSD

(b)(6) Direct  
(b)(6) Toll Free  
(b)(6) Fax  
(b)(6)

[www.midatlanticentry.com](http://www.midatlanticentry.com)

Mid-Atlantic Entry Systems  
541 Eastpark Ct.  
Sandston, VA 23150



DATE  
11/11/13  
Drawn By  
MAES

Work Order Number



Drawing is not to scale  
1 Drawing of 1

